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NINETY-FIFTH ANNUAL REPORT

of the

DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

of

SOUTH CAROLINA

Formerly the
State Board of Health
and
S. C. Pollution Control Authority

For The Period Beginning July 1, 1973
And Ending June 30, 1974

Printed Under the Direction of the
State Budget and Control Board

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LETTER OF TRANSMITTAL

The Honorable John C. West
Governor of the State of South Carolina
Columbia, South Carolina

Dear Governor West:

I have the honor to submit to you the accompanying report of the Department of Health and Environmental Control for the fiscal year ended June 30, 1974.

Respectfully yours,

E. Kenneth Aycock, M.D., M.P.H.
Commissioner

INTRODUCTION

Health has been defined by the World Health Organization as "a state of complete physical, mental and social well being and not merely the absence of disease or infirmity." Through programs in environmental protection and personal health (early disease detection, prevention, diagnosis and treatment), the Department of Health and Environmental Control works to promote the best possible individual and community health and well being.

Because each program has stated objectives and a step-phased plan, the state and its citizens are more assured of the fullest possible return from each dollar spent for public health and environmental protection.

In the interest of brevity and economy, this report gives only a concise accounting of program activities. More detailed statistics are available in the various units within the agency.

BRIEF HISTORY AND STATUTORY AUTHORITY

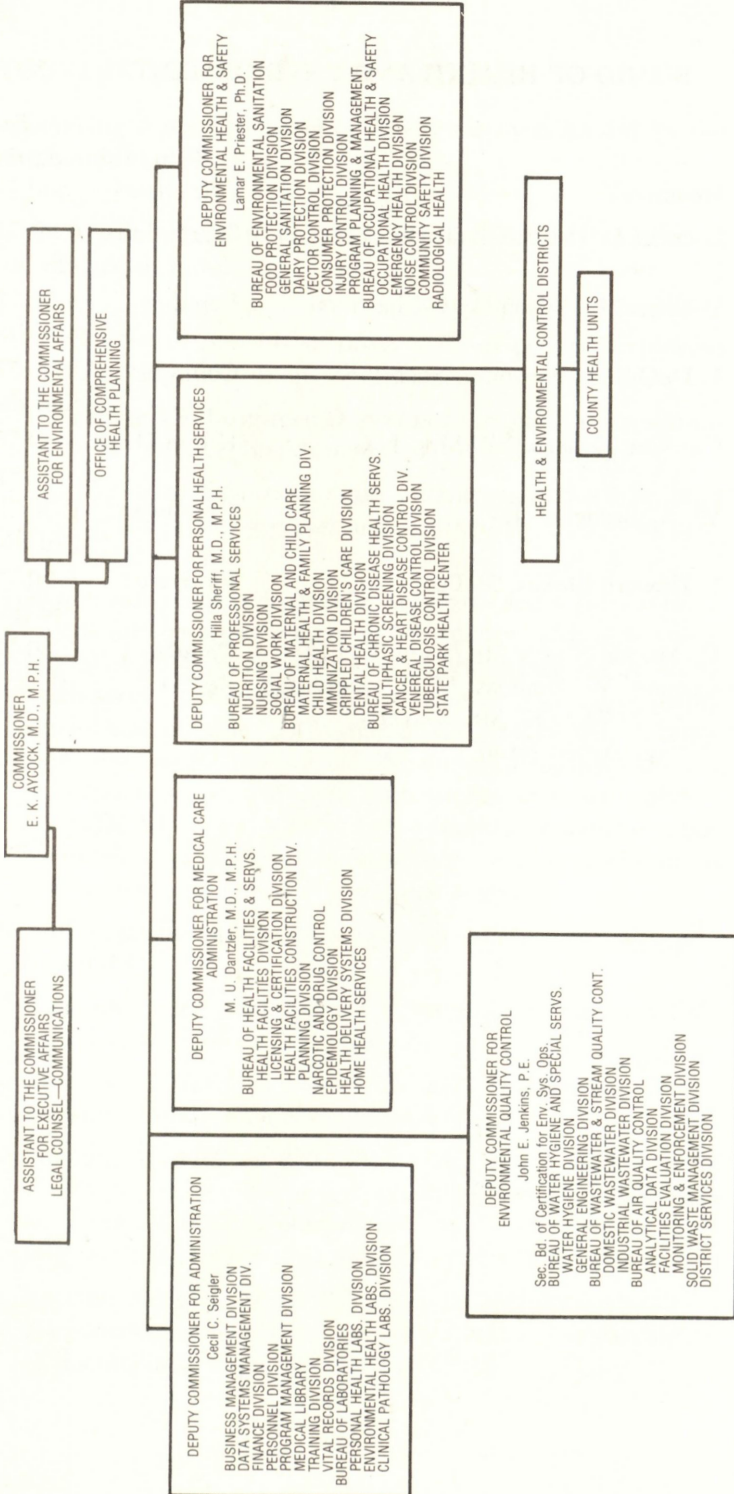
The Department of Health and Environmental Control was created in 1973 by the General Assembly through an act which merged the State Board of Health (created in 1878) and the Pollution Control Authority (created in 1970).

The authority of the agency is vested in the Board of Health and Environmental Control, which has seven members — one from each congressional district and one at large — appointed by the Governor. The Board is empowered to make, adopt, promulgate, and enforce reasonable rules and regulations for the promotion of the public health and the abatement, control and prevention of pollution.

The office of Commissioner, who is executive head of the agency, was created by the same act establishing the new department. This office replaces that of the State Health Officer which was created by the General Assembly in 1908.

The Department of Health and Environmental Control is the sole advisor to the State in matters pertaining to the public health and has the authority to abate, control and prevent pollution. Statutory authority for the agency is primarily provided in Titles 32 (sections 0.1 - 905.17 & 1105 - 1526.13) and 63 (sections 195 - 195.36) of the *S. C. Code, 1962*, as amended.

GOVERNOR BOARD OF HEALTH AND ENVIRONMENTAL CONTROL



BOARD OF HEALTH AND ENVIRONMENTAL CONTROL

<i>Members</i>	<i>City of Residence</i>	<i>Term Expiration and District</i>
Lachlan L. Hyatt, Chairman	Spartanburg	6-30-77 4th district
William M. Wilson, Vice-Chairman	Camden	6-30-77 5th district
I. DeQuincy Newman, Secretary	Columbia	6-30-77 2nd district
Caroline G. Newhall (Mrs. J. G.)	Hilton Head	6-30-75 1st district
W. A. Barnette, Jr.	Greenwood	6-30-75 3rd district
J. Howard Stokes, M.D.	Florence	6-30-75 6th district
C. Marion Shiver (deceased 3/26/74)	Camden	6-30-77
Leonard W. Douglas, M.D. (appointed 4/24/74 to fill Mr. Shiver's unexpired term)	Belton	At-large

ENABLING LEGISLATION

The following legislation affecting the agency was passed by the General Assembly in FY 1974:

Bill Desig. No.

Synopsis

H. 1626 Agency designated to administer the S. C. Medical and Dental Scholarship Fund.

H. 1453 Provides that employees of county health departments shall be entitled to all benefits of other state or county employees including group insurance benefits.

H. 1821 DHEC and the Insurance Department are given the responsibility for licensing health maintenance organizations.

H. 2481 Provide for legal abortions under certain conditions in facilities (hospital or clinic) licensed and certified by DHEC for performing abortions.

H. 2634 Requires the agency to develop standards and prescribe regulations for the improvement of emergency medical services. (EMS). Included are provisions for the regulation of ambulance services; inspection and issuance of permits for ambulances; training and certification of EMS personnel; development and coordination of an EMS communications system; and the categorization of hospital and emergency room facilities

H. 2697 Gives DHEC the responsibility to administer grants for public water and sewer authorities, rural systems, municipal systems and general purpose local government systems.

H. 2706 Authorizes the practice of acupuncture in facilities approved by DHEC.

H. 2927 Provides for the inspection of registers of retail stores selling hypodermic needles and syringes.

H. 3139 Authorizes DHEC to adopt rules and regulations governing transportation of radioactive materials.

S. 765 Amends Act 1157 of 1970, Pollution Control Authority, to clarify provisions relating to operation of new disposal system or source without a permit. (No permit shall be revoked without first providing an opportunity for a hearing.)

S. 966 Amends Act of 1974, R. 1015, so as to authorize practice of acupuncture under direct supervision of a Dentist (in addition to doctor) in facilities approved by DHEC.

OFFICE OF COMMISSIONER

During the early portion of FY 74, much of the Commissioner's time was spent in organizing the new agency formed July 1, 1973 by a merger of the State Board of Health and the Pollution Control Authority. Specific activities included orientation for members of the new Board of Health and Environmental Control, and reorganizing the agency to combine and mesh the programs.

To reflect the emphasis of the agency to the management by objective concept, each program and activity was addressed and assessed individually with the respective bureau chiefs and deputy commissioners by the Commissioner and members of his staff. Prior to these program evaluations, a training session was conducted at Santee State Park for the purpose of educating program directors in development of plans. Subsequent to those sessions, new programs and activity plans were prepared by the bureau chiefs in the problem, objective, method and evaluation format (POME). Consultation and guidance were provided by the Commissioner and staff of the Division of Program Management. Before plans were finalized, another meeting was held at Santee State Park for a group review and critical analysis of each plan.

On the basis of these evaluations, there was re-emphasis related to decentralization of some program implementation from the state to the district offices. The role of the state staff is to be more in standard setting and monitoring; the district staff is to have more freedom in program implementation and accountability.

To supplement development of new program plans, efforts were directed to preparation of program budgets, expenditure reporting by programs and improved data management. Ground work for the finance management system utilizing data processing services was completed; implementation is to begin early in FY 75.

Inherent duties of the Office of the Commissioner include membership and participation on various committees and councils as well as attendance and participation in many meetings on health and health related matters with other state, local and federal governmental officials and civic groups. Membership on some of these bodies is required by statute while others are appointive. The Commissioner actively served on more than seventeen state government councils, boards and study committees. These included the Comprehensive Health Planning Advisory Council, Health Policy and Planning Council, Child Development Policy Council, Social Development Policy Council, Governor's Beautification Committee, State Housing Authority and others. Mem-

bers of his staff represented the agency and participated in various other organizations.

The Commissioner participated in various national and regional organizations related to or involving public health including the American Public Health Association (APHA), Southern Branch APHA, and the Association of State and Territorial Health Officers (ASTHO).

Preparation of the annual budget proposal, the Annual Report, and other required and informational reports consumed a substantial amount of staff energy. For the third consecutive year, the agency participated in the ASTHO field testing for development of a nationwide, uniform system of reporting health services and activities.

To reflect changes in policy that occurred during the past two years, the agency *Policy Manual* was completely revised.

Because members of the general assembly need information about the goals, objectives, and activities of the agency, the legislative liaison staff spent much of its time during the legislative session providing legislators with this information and expressing the agency's position concerning health or health related matters.

Because there was no single unit within the agency to review environmental standards, rules, regulations, statutes, and to arrange for hearings and appeals for those persons or firms affected by environmental regulations, the office of the Assistant to the Commissioner for Environmental Affairs was established. Subsequently, all existing statutes, rules and regulations pertaining to agency responsibilities in environmental protection were reviewed and critically assessed.

In addition to nine cases prepared for court action and administrative hearings, the staff of the office of General Counsel prepared approximately 55 legal pleadings. Besides the normal activities of providing consultation and assistance to units of the agency needing legal support, the General Counsel made a study of the development of standards and controls in environmental health. Following this study, a booklet containing a brief history of environmental standards and controls and a compilation of the lawsuits on water pollution control and solid waste disposal brought or defended by the state during the years 1968-72 was published.

The record consultants visited fifteen county health departments to review records and assist them with problems in record keeping. They provided consultation to other units of the agency and participated in several meetings and workshops concerning records systems — development and revision of records; filing techniques, preparation of

records. Considerable work was done in keeping the *Records Manual* current and in revision of the Retention and Disposition of Records Schedule.

The staff of the Office of District Management assisted the Commissioner in providing administrative support and guidance to district personnel.

Through the efforts of the Commissioner and his staff, the agency made some significant achievements including, but not limited to, the following:

1. Promotion of a study for regionalization of high risk infant care;
2. Implementation of a federally supported iron supplement food program for women, infants and children in nine counties;
3. Contracts with the Department of Social Services (DSS) for provision of physicians' services and early screening, diagnosis and treatment services for DSS clients;
4. Preparation of new plans for development of comprehensive emergency medical services;
5. Agreement with the Atomic Energy Commission that no high level radioactive wastes be stored in S. C.;
6. Obtained federal grant for cervical cancer screening;
7. Began pilot project for early disease detection (multiphasic screening).

BUSINESS MANAGEMENT

Function:

Support the agency through business activities in areas of procurement, distribution, maintenance, contract administration and inventory control.

Significant Activities:

<i>Activity</i>	<i>\$ Amount</i>	<i>% Increase Over FY 73</i>
Purchasing (supplies, equipment, etc.)*	\$4,292,190	15
Drugs and biologicals contracts negotiated	429,000	23
Maintenance Contracts negotiated	20,000	18
Mail and Packages handled**	81,598	13.5
Inventories (equipment and supplies)	3,500,000	35

* 6,500 purchase orders for office and laboratory supplies and equipment were processed.

** 910,710 packages and pieces of mail were sent.

COMMUNICATIONS

Function:

To provide the staff assistance, including printing, photo processing, art, audio-visual, and film and materials library, and the coordination necessary to design and implement an educational component into all agency activities.

ACTIVITIES AND SERVICES

<i>Type Service</i>	<i>FY 73</i>	<i>FY 74</i>
Black and White prints (pictures)	7,800	11,129
Contact sheets (Photographic proofs)	200	285
Rolls of film distributed	0	148
ID photographs	500	685
Color slides	0	6,578
Pages printed	5,399,300	5,599,300
No. bookings of films	5,489	5,782
No. film showings	4,348	10,946
No. in attendance	161,615	324,916
No. bookings of audio-visual equipment	3,806	7,500
TV and radio announcements	8	12
Brochures designed, produced and disseminated	DNA*	31
Posters designed, produced and displayed	DNA*	81
Newsletters designed, produced and disseminated	DNA*	24
Forms designed, produced	DNA*	93
Overhead Transparencies	DNA*	220

(*Data not available.)

There were 200 news releases issued, 140 of which appeared in seven or more newspapers within the state.

During two months of operation (May and June) of the audio-visual department, four slide tape programs and one video program were produced.

The Educational Resources Center is the agency's distribution point for health and environmental education materials. During the month of June, 55,282 individual pieces of educational material were mailed in response to requests.

Four issues of *Update Magazine* were published and distributed to 8,500 people.

COMPREHENSIVE HEALTH PLANNING

Problem:

The providers of health care and the community leadership lack both the awareness of the health needs of the citizens of this state and the necessary coordination needed to identify and meet such needs.

Objective:

To update and implement the existing South Carolina State Comprehensive Health Plan.

Narrative:

The Advisory Council for Comprehensive Health Planning (CHP) through its State Plan Committee received input from area-wide CHP agencies, task forces, state agencies and voluntary health organizations and is in the process of reviewing and analyzing the material for the plan update.

Objective:

To study and make recommendations on specific health problems.

Narrative:

The Task Force on Environmental Health studied 17 problem areas, made recommendations for solutions, and established priorities. The Task Force on Health Facilities examined the State Hospital Construction and Franchising Act, retention of primary health care practitioners, hospital emergency departments, patient sitter training and nursing and boarding home licensing and inspection requirements. The Task Force on Health Services studied dental care, internal care and regionalization of services. Reports of these three task forces were approved, published and disseminated.

Objective:

To review and comment on grant applications to help ensure that they are in accord with principles, goals, and established priorities as required by state and federal regulations.

Narrative:

Sixty one (61) grant applications involving over \$10 million were reviewed.

Objective:

To maintain broad public involvement in the health planning process.

Narrative:

A procedure for orientation and continuing education of Council and Health Forum was developed and implemented. The Public Information Section published a monthly newsletter, *Comprehensive Health Planning for South Carolina*, and prepared CHP news releases for distribution to the news media throughout the State.

Objective:

To facilitate the creation of mechanisms for communication and exchange with health related and other planning organizations.

Narrative:

The CHP Council studies, evaluates, and makes recommendations on health bills pending in the legislature. Twenty-five (25) bills were reviewed and evaluated.

Objective:

To define, identify, acquire, and publish necessary data to support health planning activities.

Narrative:

Suggested Data Requirements for Comprehensive Health Planning, a document that identifies the types of data needed for health planning purposes, was published and distributed.

Objective:

To provide the necessary assistance to the ten district health planning agencies to assure that effective comprehensive health planning is being pursued in all areas of the state.

Narrative:

The 314(a) agency contracts with each of the ten district health planning agencies for services which include preparation of a district health plan, a work program, a progress report, franchising and capital expenditure review under Section 1122 of the Social Security Act. Technical assistance is provided on special projects.

Objective:

To review capital expenditures for hospitals, nursing homes and other health facilities.

Narrative:

Twenty-(20) proposals have been, or are in the process of being, reviewed for (a) community need, (b) availability of manpower, (c) economic feasibility and (d) cost containment.

Objective:

To review and comment on grant applications pursuant to U. S. Bureau of the Budget Circular A-95.

Narrative:

Five hundred sixty six (566) grant applications were reviewed and processed.

DATA SYSTEMS MANAGEMENT

Function:

To provide Data Management services to all units of the Agency so as to plan, develop, implement and maintain processes producing information necessary to monitor, predict and improve the efficiency and effectiveness of the activities and services provided by the Agency.

Significant Activities:

A billing and statistical system for laboratory services was developed, instituted and maintained; a reporting system for the General Sanitation program was developed, instituted and maintained; and a Financial Information System was developed for installation on July 1, 1974.

Extensive systems design, programming effort and implementation planning was required to accomplish major modifications of operational systems in the following program areas:

- Crippled Children
- Family Planning
- Food Protection
- Narcotic and Drug Control
- Early Disease Detection

Design and programming efforts for building a master file of birth records from 1915 to the present were completed. Approximately 75% of those birth records have been placed in this file which will be used for certification in 1975. The use of micro-fiche was instituted to provide birth and death listings, for current years, to county offices for certification. Since January 1, 1974, information on births and deaths has been transmitted to the National Center for Health Statistics.

A study of the existing data input requirements resulted in the installation of a key disk entry system providing greater efficiency, quieter operations and improved accuracy in entry work.

Monitoring of quantity and quality of data at the input point has improved the general effectiveness of this supportive service. In-service training was made available for all unit employees.

EPIDEMIOLOGY

Function:

Control of communicable diseases as defined through a surveillance system consisting of morbidity and mortality reporting from any reliable source that can be developed. Investigation of all unusual disease occurrences and outbreaks and institution of appropriate control measures.

Significant Activities:

A means of improved communication with state physicians and public health personnel has been provided through widespread circulation of a Monthly Newsletter entitled "Epidemiologic Notes."

New activities such as investigations of staphylococcal outbreaks in hospital nurseries and other nosocomial infections, investigations of plasmapheresis centers, investigations discerning the disease producing potential of certain environmental pollutants, and extensive involvement in planning regionalization of perinatal care services have been undertaken. Closer liaison with the Center for Disease Control has been established and currently an Epidemic Intelligence Officer has been assigned to the Division of Epidemiology.

The following tabulation, for calendar year 1973, illustrates the relative magnitude of reported communicable disease requiring continued active surveillance.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
COMMUNICABLE DISEASE MORBIDITY REPORT

CALENDAR YEAR	Infectious Hepatitis	Serum Hepatitis	Measles (Rubella)	German Measles (Rubella)	Mumps	Meningitis Aseptic	Meningococcal Infections	Pertussis	Influenza	Encephalitis Primary	Encephalitis Post-Infectious	Typhoid	Salmonellosis Except Typhoid	Shigellosis	Strep Throat & Scarlet Fever
1973															
1972	455	21	230	51	188	48	27	24	7728	12	5	5	108	31	3707
1973	759	32	76	80	358	32	17	12	7353	15	2	5	171	85	4113
ABBEVILLE	2														
AIKEN									26				5	1	
ALLENDALE	1														
ANDERSON			1		8				1914				15	3	77
BAMBERG															
BARNWELL															
BEAUFORT	309	6	3	3	45	4	1		306				2	1	110
BERKELEY	2		11	1											
CALHOUN	1		2		2				30						4
CHARLESTON	121	8	21	16	14		3	4	734	3		2	37	27	1588
CHEROKEE	8														
CHESTER	4								50						8
CHESTERFIELD													1		
CLARENDON															
COLLETON							1						2		
DARLINGTON	4				1	1							2		285
DILLON	1											1			
DORCHESTER	3							2	70			1			8
EDGEFIELD															
FAIRFIELD															
FLORENCE					3								5		7
GEORGETOWN	1												1		
GREENVILLE	72	6	8	7	9	16	1	1	486	9	1		24	4	70
GREENWOOD	41		3		28	1	1	2	227	1			2		196
HAMPTON															
HORRY	7		3		5		2		4				10	1	389
JASPER															
KERSHAW	3				3								6		
LANCASTER	2	2							180						107
LAURENS	9	1			2		1		68					1	66
LEE	2		1												
LEXINGTON	11							1					3		
MARION	1	1													
MARLBORO															
McCORMICK														3	
NEWBERRY															
OCONEE	1	1	8	5	2				2188				1	1	89
ORANGEBURG	3				1			1	85						13
PICKENS	14			1		2			161	2			2	1	14
RICHLAND	22	6	5	45	12	5	4	1	349				49	39	305
SALUDA	1														
SPARTANBURG	15	1	4	1		2			154			1	2		15
SUMTER	10		6	1	221		2						2	2	446
UNION							1								
WILLIAMSBURG															
YORK	88				2	1			321		1			1	316

CALENDAR YEAR	Food Poisoning	Brucellosis	Tularemia	Rocky Mt. Spotted Fever	Typhus Fever	Tetanus	Diphtheria	Polio- myelitis	Chicken- pox	Amebiasis	*Gonorrhea	Infectious *Syphilis	Active Tuberculosis	Rheumatic Fever	Meningitis, Other
1973															
1972	0	2	0	22	0	3	1	0	722	2	27076	872	651	0	42
1973	0	2	1	32	0	1	0	0	1300	4	20533	1234	619	2	44
ABBEVILLE											76		2		
AIKEN									3		336	17	14		1
ALLENDALE											44	3	3		
ANDERSON				4				81			1075	6	18		
BAMBERG											219	5	4		
BARNWELL											141	11			
BEAUFORT									18		267	17	13		
BERKELEY											77		11		
CALHOUN				1				9			114	2			
CHARLESTON								500			2861	95	64	1	5
CHEROKEE				1				3			173	21	7		
CHESTER								1			272	3	3		
CHESTERFIELD						1					81	15	6		
CLARENDON											307	11	8		
COLLETON											94	2	19		
DARLINGTON									24		316	21	10		1
DILLON									6		202	38	18		
DORCHESTER									6		201	1	4		
EDGEFIELD											226	6	4		
FAIRFIELD											68	1	6		
FLORENCE				1				1			795	127	56		
GEORGETOWN											134	29	6		
GREENVILLE				9				50	1		2912	52	42		25
GREENWOOD		1		1				102	3		305	11	2		
HAMPTON											117	9	6		
HORRY			1					28			545	45	30		
JASPER											129	1	4		
KERSHAW								1			346	11	8		
LANCASTER								27			186	2	6		1
LAURENS				1							202	21	19		
LEE											205	30	7		
LEXINGTON		1							2		323	10	9		
MARION											113	28	2		
MARLBORO											84	47	9		
McCORMICK											378	1	12		
NEWBERRY											143	5	3		
OCONEE								8			154		4		
ORANGEBURG				1				29			880	51	38		5
PICKENS				5				30			116		7		
RICHLAND								72			2930	167	54	1	3
SALUDA											31		3		
SPARTANBURG				3				8			768	69	21		1
SUMTER				2				281			499	202	14		
UNION				1							168	5	4		1
WILLIAMSBURG											388	9	21		
YORK				2					10		532	27	18		1

Gonorrhea, military — 948

*Excluding Military: Syphilis, military — 47

FINANCE

Function:

Support the fiscal policies and management of all units and health programs of the Agency.

Significant Activities:

During FY 74 fees were established for laboratory services rendered to private physicians and hospitals. Preparations were made to convert the present accounting system to a computerized financial management system which is to be implemented in phases in FY 1975.

Total expenditures for FY 74, in comparison to FY 73, follows:

FINANCIAL EXPENDITURES

	FY 73	FY 74
Expenditures from State Appropriations		
Dept. of Health & Environmental Control	\$10,396,494	\$15,086,431
State Park Health Center	<u>2,457,350</u>	<u>2,640,198</u>
Total	12,853,844	17,726,629
Expenditures from Local Appropriations		
County Health Units	3,576,734	4,513,737
Maternity & Infant Care (Charleston)	122,500	142,366
Maternity & Infant Care (Greenville)	85,747	124,692
Family Planning	<u>272,530</u>	<u>160,488</u>
Total	4,057,511	4,941,283
Federal Grants		
Public Health Service		
Planning Grant (314-A)	118,800	130,700
Program Funds (314-D)	1,115,476	1,113,303
Childrens Bureau		
Crippled Children Program	1,560,519	1,284,766
Maternal & Child Health	1,166,028	1,293,253
Mental Retardation	32,328	32,328
Environmental Protection Agency		
Water Pollution Control		884,683
Air Pollution Control		<u>264,895</u>
Total Grants	3,993,151	5,003,928
Federal Projects		
Medical Facilities Construction	\$ 2,345,433	\$ 2,108,420
Hospital Medical Facilities	66,000	52,364
Migrant Health (Beaufort)	18,362	31,523
Migrant Health (Charleston)	66,931	85,104
Immunization	129,912	87,500

Federal Projects

Venereal Disease Control	246,960	350,822
Pesticide Study	31,861	37,493
Regional Cancer Project	19,576	-0-
Laboratory Training Project	18,938	17,578
Environmental Control of Waters	125,942	59,280
Family Planning (Statewide)	1,833,647	3,008,507
Family Planning (Charleston)	511,502	-0-
Maternal & Infant Care (Charleston)	436,311	508,451
Maternal & Infant Care (Greenville)	331,650	374,077
Highway Safety Project	10,715	15,041
Health Maintenance Organization	35,454	99,746
Emergency Employment Act	219,872	-0-
Administration of Federal Projects	12,964	160,383
Military Experience Directed into Health Careers (MEDIHC)	16,665	27,343
Child Evaluation Project	10,576	11,832
Recreation Grant	2,605	-0-
Occupational Safety & Health Act (OSHA)	9,285	172,212
Emergency Medical Services Training	17,079	-0-
Regional Heart Project	13,533	-0-
Addiction Program	22,132	27,301
Medical Records Workshop	445	-0-
Health Facilities Survey	15,000	8,000
Maternity & Infant Care (Pickens)	97,705	184,825
Dental Project (Appalachia)	10,923	16,199
Community Medical Health Centers		5,144
Developmental Disability		7,916
Regional Hypertension Control Program		11,018
Family Planning Training Grant		31,498
Women, Infant, & Children		184,501
Training of Emergency Medical Technicians		4,722
Radio Communication Standards		14,995
Santee Cooper		55,349
Solid Waste Collections & Disposal Operators		13,348
Solid Waste Disposal		40,723
Waste Water Training		7,225
Management Systems for Treatment Plant Operations		24,761
Manpower Training		3,464
Total	<u>6,677,978</u>	<u>7,848,215</u>
Social Security Administration		
Health Insurance Program	246,741	153,537
Medicare and Medicaid	2,539,969	3,481,409
Skilled Nursing Facilities		252,471
Section 1122 SSA		88,089
Total	<u>2,786,710</u>	<u>3,975,506</u>

Federal Contracts

Air Pollution	\$ 20,505	\$ 22,304
Pediatric Tissue Contract		<u>17,276</u>
Total	<u>20,505</u>	<u>39,580</u>

Other Special Services

Vital Statistics	128,480	244,394
Pharmacy Licenses	25,141	15,690
Drug Protection	12,277	4,585
Child Screening	38,361	141,732
Hearing Aid Licenses	1,083	2,608
Family Planning Services		13,667
Physicians Services		6,436
Environmental Monitoring		9,962
Insecticides		38,365
Typhus Revolving		<u>2,865</u>
Total	<u>205,342</u>	<u>480,304</u>
GRAND TOTAL (Expenditures)	<u>\$30,595,041</u>	<u>\$40,015,445</u>

HEALTH DELIVERY SYSTEMS (HMO)*Problem:*

The present health care delivery system in South Carolina is not meeting the needs and desires of the population in general; it is not organized and neither is the quality nor the cost of medical care being adequately monitored. There is a severe lack of health manpower within the state.

Objective:

To develop a Health Maintenance Organization offering comprehensive health care, including in and out-patient services, home visits, prescription drugs, dental care and mental care, to state employees, public school teachers and other public employees.

Narrative:

The following activities to accomplish the objective have been completed or are in the process:

- The creation of a non-profit organization to operate a HMO was in the final stages on June 30, 1974.
- A State law providing for the creation and licensing of a HMO was enacted in June 1974.
- Support from State employees and the providers of health care has been obtained.
- A Health Benefits Plan, premium structure, plan for marketing services, enrolling members and financial plan is being developed.

- e. Negotiations with The S. C. Foundation for Medical Care personnel to provide physician's services has been initiated. A formal agreement is in process.
- f. A verbal agreement with an insurance carrier to administer out-of-area and emergency benefits has been negotiated. A formal agreement is in process.

HEALTH FACILITIES AND SERVICES

Problems:

The problems of this program are basically fourfold:

- a. A large number of beds in existing health facilities are non-conforming; many of the existing public health centers do not meet required standards; in some areas with adequate health facilities and services, the services are not always available to the indigent population; and, providers in some areas are prone to propose additional facilities and services which would be duplicative;
- b. Delays in the plan review process result in higher construction costs and delayed availability of services; many facilities constructed prior to 1972 do not meet current life and fire safety standards;
- c. Facilities providing services under Title XVIII and XIX programs are not in compliance with the Conditions of Participation; health facilities licensed by the state do not continuously meet the minimum requirements of the licensing standards;
- d. Individual hearing aid dealers and prospective applicants have a poor understanding of their responsibilities under the Rules and Regulations promulgated under the law.

Objective:

The insure that Hill-Burton grant and loan funds are allocated on the basis of need.

Narrative:

Actions taken to meet this objective include the administration of the Hill-Burton Act, the development of two complete State Plans, and the development of the construction portion of an additional State Plan. Hill-Burton funds were allocated as shown below in accordance with priorities established in the state plan which identifies need.

TABLE I — ALLOCATION OF HILL-BURTON FUNDS, FY 74

Category	Amount
Public Health Centers	\$ 10,000
Long Term Care	151,000
Outpatient Facilities	1,369,021
Modernization	3,319,368
Loan approvals*	12,816,500
Total	\$17,665,889

(*Unexpended loan guarantee funds for FY 72 and FY 73 released and allocated during FY 74.)

Objective:

To place needed health facilities and services in proper areas by issuance or denial of certificates of need.

Narrative:

The certification of need for health facilities and services was administered in accordance with the "State Hospital Construction and Franchising Act." Certificates of need were issued as follows:

TABLE II — CERTIFICATES OF NEED

Type facility or service	No. Issued		No. Exempted		No. Denied	
	FY 73	FY 74	FY 73	FY 74	FY 73	FY 74
Hospital care	27	22	3	9	0	1
Nursing care	23	12	1	1	1	2
Intermediate care . . .	7	10	0	0	0	0
Other	5	4	2	0	0	1

The table above indicates a decrease in certificates of need issued in the categories of hospital and nursing care. This is in part a reflection of the accomplishment of priorities in the State Plan as regards the need for facilities and services.

Availability of beds in various facilities is indicated in the following table.

TABLE III — AVAILABILITY OF BEDS, BY TYPE FACILITY

Type Facility	No. of Beds Needed		No. Beds Conforming		% of Need Met (Conforming)	
	FY 73	FY 74*	FY 73	FY 74*	FY 73	FY 74*
General Hospital . . .	15,400	13,267	11,030	11,312	71.6	85.3
Long Term Care . . .	7,173	8,794	4,057	4,382	56.5	49.8
Intermediate Care . .	3,128	3,318	1,058	1,404	33.8	42.3
Mental Facilities . . .	6,450	6,711	1,233	1,233	19.1	18.4
T. B. Hospitals	286	134	280	239	97.9	97.9
Rehabilitation	749	700	80	110	10.7	15.7

*FY 74/Source: Draft-1974 Hill-Burton State Plan and Construction Status Report, July 1974, unapproved.

The changes in the number of beds needed between FY 73 and FY 74 is due to changes in criteria for calculation, and change in utilization. In most instances the number of beds conforming increased due to completion of construction.

Information about availability of other health facilities and/or services follows:

TABLE IV—AVAILABILITY OF OTHER HEALTH FACILITIES AND/OR SERVICES

Type Facility	Total Needed		Number Conforming		% Need Met (Conforming)	
	FY 73	FY 74*	FY 73	FY 74*	FY 73	FY 74*
Outpatient and						
Emergency	132	131	89	93	67.4	71.0
Rehabilitation	19	17	4	3	21.1	17.6
Public Health						
Centers (Primary) .	62	61	20	21	32.2	34.4
Public Health Centers (Auxiliary)	193	169	58	52	30.1	30.8
Community Mental Health Centers** .	17	17	8	8	47.1	47.1
Development						
Disabilities						
Centers	1,171#	2,424	1,120***	1,601	95.6	66.05

* Source: Draft-1974 Hill-Burton State Plan, unapproved.

** Source: 1971-72 Community Mental Health Plan.

*** Source: 1974 Development Disabilities Center Plan — no criteria for conformity-total facilities available in number conforming column.

Corrected from 1,120 shown in FY 73 Annual Report.

Changes indicated in rehabilitation, outpatient and public health facilities are primarily related to revised and updated inventories of services provided to better fulfill the needs of the public. Increased emphasis on the provision of services to the developmentally disabled has caused a substantial increase in the need and inventory of facilities throughout the state.

Objective:

To assure that a reasonable volume of uncompensated services are provided to persons unable to pay in health facilities that received Hill-Burton funding based on federal requirements.

Narrative:

Federal requirements are that a level of uncompensated services in health facilities, constructed in whole or part with Hill-Burton monies

within the past 20 years, be provided to persons who are unable to pay for services in a given year. Three options are available to the facilities. Selections of the options by type facility are as follows:

TABLE V — UNCOMPENSATED SERVICES FOR PERSONS
UNABLE TO PAY (HILL-BURTON)

Type Facility	No. Facilities	Option Selected		
		3%	10%	Open Door
Hospitals	56	27	11	18
Nursing Care	21	13	1	7
Rehabilitation	4	0	0	4
Public Health Centers .	30	0	0	30

Audits will begin in July 1974 to insure compliance with the option selected.

Objective:

To expediently process construction plans for compliance with applicable codes and regulations.

Narrative:

During FY 1974, 75 sets of drawings and specifications for alterations, additions and new construction of hospitals, nursing care facilities, public health centers, and mental health centers were reviewed. Ninety-four consultation visits were made to assist nursing care facilities and hospitals with design and planning problems.

Objective:

To ensure that all health care facilities electing to participate in Titles XVIII and XIX programs meet the current life and fire safety standards.

Narrative:

Hospitals which are accredited by the Joint Commission of Accreditation of Hospitals are not subject to survey for life and fire safety standards except upon request. All hospitals and skilled nursing facilities electing to participate in Title XVIII and XIX programs were surveyed and met life and fire safety standards. During the year 49 follow-up visits were made to ensure that recommended corrective actions to improve fire safety had been completed.

Objective:

To certify that facilities electing to participate in the Titles XVIII and XIX programs meet and maintain compliance with the conditions of participation.

Narrative:

For certification purposes each hospital, nursing care facility, independent laboratory and home health agency was surveyed within a 12 month period. there was at least one follow-up visit within the year. These activities are indicated below:

TABLE VI — CERTIFICATION ACTIVITIES,
CONDITIONS OF PARTICIPATION

Type Facility	No. Eligible	No. Surveyed		No. Certified	
	FY 74	FY 73	FY 74	FY 73	FY 74
Hospitals	82	73	71	73	71
Skilled Nursing Facilities	80	63	78	63	78
Intermediate Care Facilities	59	0	10	0	8
Laboratories	—	10	14	10	14
Home Health Agencies (Independent) ..	—	2	1	2	1
Home Health Agencies (Subunits)	—	25	13	25	13

The reduction in the Home Health Services subunits is due to the amalgamation of county units into district units.

Two intermediate care facilities (ICF) surveyed did not meet requirements for certification. Certification of ICF began late in the year, hence the low percentage of those eligible being certified.

Objective:

To license all health care facilities, mandated by law, which meet standards and conduct interim inspections to ensure continuous compliance.

Narrative:

Each hospital, nursing care and intermediate care facility in the state was inspected and subsequently licensed. Mental and federally operated hospitals and those infirmaries maintained by privately owned educational institutions for the exclusive use of their student bodies are not subject to licensing by this agency. The licensing activities for FY 74 in comparison to FY 73 are indicated below.

TABLE VII — LICENSING ACTIVITIES

Type Facility	No. Inspected & Licensed	
	FY 73	FY 74
General Hospitals	82	80
Specialized Hospitals	1	1
Institutional General Hospitals	3	3

Type Facility	No. Inspected & Licensed	
	FY73	FY 74
Institutional General Infirmaries	6	6
New General Hospitals		1
Class I Nursing Care Facilities	78	78
New Class I Nursing Care Facilities		2
Institutional Nursing Infirmaries	2	2
Institutional Nursing Care Facilities	1	1
Institutional Minimum Nursing Care Facilities (State Owned)	3	3
Nursing Care Facilities (State Owned)	2	3
Intermediate Care Facilities (ICF)	29	29
New Intermediate Care Facilities		2
ICF Identifiable as part of a Nursing Care Facility	36	28
Institutional ICF	3	5
Acupuncture	0	2

In addition to the annual licensing inspection of each health care facility, a program of inspections on an interim basis was carried out in those facilities where such inspections were warranted. Five new health care facilities made application and were licensed for FY 74. Six facilities either ceased operation or changed names or location during FY 74. Also during the year 65 environmental control in-service sessions were conducted in an attempt to upgrade housekeeping practices in health care facilities. These areas included laundry operations and handling and storage of clean and soiled linens as related to infection control.

Objective:

To license and/or issue temporary permits to all hearing aid dealers who apply and who meet requirements of the Hearing Aid Act.

Narrative:

One hearing aid dealer examination (both written and practical) was administered to eight applicants desiring to be licensed as hearing aid dealers in South Carolina. As a result five of the applicants passed both written and practical portions of the examination and are eligible to be licensed. The three remaining applicants failed the practical portion of the examination and must retake this portion to be eligible for licensure. There were 73 hearing aid dealers licensed in the State in calendar year 1973 with 28 temporary permit holders who were in a training program under the supervision of a licensed dealer. As of June 30, 1974 there were 71 licensed dealers and 16 temporary permit holders. This reduced number of licensed dealers and temporary permit holders is attributed to the up-grading and refinement of the program.

LABORATORIES

Function:

To provide adequate, accurate, and reliable laboratory services in support of the personal and environmental health delivery systems of South Carolina.

Significant Activities:

The total laboratory examinations performed are shown below:

TABLE I — TOTAL LABORATORY EXAMINATIONS

Type of Examination	Central Lab FY 1974	Reg. Labs FY 1974	Total Lab FY 1974	Total Lab FY 1973	Percent Change
Bacteriology	12,263	3,860	16,123	12,991	+24.1
Gonorrhea	(99,033)	(73,014)	(172,047)	(88,858)	+93.6
Cultures	98,775	66,598	165,373	81,307	+103.4
Smears	258	6,416	6,674	7,551	-11.6
Mycobacteriology	43,284	19,708	62,992	68,382	-7.9
Mycology	25,025	—	25,025	16,395	+52.6
Virology	(73,771)	—	(73,771)	(44,611)	+65.4
Rubella Serology	59,044	—	59,044	36,475	+61.9
Other Serology	4,953	—	4,953	3,403	+45.6
Hepatitis	641	—	641	429	+49.4
Rabies	933	—	933	929	+0.4
Isolations	8,200	—	8,200	3,375	+143.0
Parasitology	25,098	4,924	30,022	27,346	+9.8
Immunology	31,169	3,683	34,852	37,796	-7.8
Syphilis Serology	267,245	31,808	299,053	307,616	-2.8
Chromosome Analyses	58	—	58	37	+56.8
Phenylketonuria	40,328	—	40,328	38,887	+3.7
Hemoglobinopathies	52,220	—	52,220	38,807	+34.6
Hematology	—	65,140	65,140	52,024	+25.2
Immunohematology	—	2,205	2,205	1,534	+43.7
Clinical Chemistry	—	22,604	22,604	11,223	+101.4
Urinalyses	—	63,120	63,120	59,986	+5.2
Miscellaneous Clinical Tests	—	4,782	4,782	3,063	+56.1
Dairy Products	41,057	16,425	57,482	47,639	+20.7
Water Bacteriology	(31,274)	(31,115)	(62,389)	(59,637)	+4.6
Drinking Water	23,632	19,694	43,326	43,908	-1.3
Swimming Water	7,642	7,875	15,517	14,005	+10.8
Oyster Bed Water	—	3,546	3,546	1,724	+105.7
Water Chemistry	(60,427)	—	(60,427)	(31,506)	+91.8
Drinking Water	43,178	—	43,178	31,506	+37.1
Environmental Monitoring*	17,249	—	17,249	—	—
Food	2,097	221	2,318	6,205	-62.6
Toxicology**	(10,729)	(4,935)	(15,664)	(25,881)	-39.5
Drug Screens	8,640	—	8,640	20,870	-58.6
Pesticides	2,089	4,935	7,024	5,011	+40.2
Special Chemistry	14,123	—	14,123	6,128	+130.5
OSHA***	1,384	—	1,384	—	—
TOTAL	830,585	347,544	1,178,129	986,552	+19.4

* This is only for last 2 months of FY 1974. Previous work performed before PCA labs merged with Bureau of Laboratories.

** Listed with Special Chemistry in FY 73.

*** Environmental Samples from Industrial Work Areas (required by Occupational Safety and Health Act).

As shown in the above table the number of examinations performed in FY 1974 increased 19% over the previous fiscal year with significant workload increases occurring in several areas. The increase in gonorrhea cultures reflects efforts to culture 100% of all females who receive pelvic examinations in public health departments. The increased examinations in virology were largely rubella examinations which increased by 22,569. In clinical chemistry the increase portrays the multiphasic clinical chemistry screening to support the early disease detection program. The 91.8% increase in water chemistry examinations in support of the water supply program is largely due to two factors: (1) more samples and (2) more tests per sample. Twenty parameters are now measured as compared to 18 last year. The increases in special chemistry were primarily blood lead examinations, up 8,004 from a year ago.

Two new fluorescent antibody tests were instituted in the Immunology Section: one for Rocky Mountain Spotted Fever, and the other for gonorrhea. It is now possible to examine live ticks for the presence of *Rickettsia rickettsii*, the cause of Rocky Mountain Spotted Fever. This service will aid in an earlier diagnosis of this disease. The serological test for gonorrhea is being evaluated, but is not yet available for diagnostic work.

On January 1, 1974, the Bureau of Laboratories initiated charges for a number of the laboratory services as recommended by the Governor's Management Review Commission. The nine tests selected to be placed on a fee schedule are those that are readily available elsewhere or those not in direct support of public health programs. These tests include: serological tests for syphilis, rubella antibody, fluorescent treponemal antibody, febrile agglutinins, infectious mononucleosis, toxoplasmosis, Rh factor determinations, chromosome studies and drug determinations.

A substantial increase in efficiency has been realized by repairing laboratory equipment in the Instrument Repair Section, which was formed in the Division of Scientific Services.

New laboratory safety measures have been initiated in compliance with the Federal Occupational Safety and Health Act.

Training activities are shown in the following three tables.

TABLE II — PROFICIENCY TESTING

Program	No. of Labs Participating		No. of Shipments		Total No. of Specimens Shipped	
	FY 73	FY 74	FY 73	FY 74	FY 73	FY 74
Bacteriology	58	58	3	2	840	580
Mycology	26	28	4	4	364	448
Parasitology	53	62	4	4	1,060	1,240
Syphilis Serology ...	<u>83</u>	<u>89</u>	<u>7</u>	<u>10</u>	<u>5,810</u>	<u>8,900</u>
TOTAL	218	237	18	20	8,074	11,168

TABLE III — BENCH TRAINING AT THE BUREAU

Section	No. of Students		Total Trainee Days	
	FY 73	FY 74	FY 73	FY 74
Gonorrhea	6	0	6	0
Bacteriology	6	5	90	41
Immunology	1	0	2	0
Mycology	2	1	2	5
Virology	2	4	10	10
Parasitology	1	1	4	3
Mycobacteriology	0	3	0	3
Milk Laboratory	<u>1</u>	<u>3</u>	<u>5</u>	<u>3</u>
TOTAL	19	17	119	65

TABLE IV — BUREAU TRAINING COURSES AND SEMINARS

	No. of Students		No. of Course Days	
	FY 73	FY 74	FY 73	FY 74
Central Laboratory	92	238	33.5	25.5
Field Courses	<u>82</u>	<u>26</u>	<u>11.5</u>	<u>1</u>
TOTAL	174	264	45.0	26.5

In addition to the examinations cited in Table I, 475 lead analyses were conducted on adult autopsy tissue and environmental samples, and 1,372 analyses were performed for heavy metal content on pediatric autopsy tissue submitted by the Environmental Protection Agency.

MEDICAL LIBRARY

Function:

To provide up-to-date books, journals, indexes, bibliographies, and other library resources, reference tools, and services, needed by the various bureaus, divisions, and units of the Department of Health and

Environmental Control (includes district and county staffs) in carrying out programs and achieving objectives.

Significant Activities:

The librarian prepared research bibliographies, obtained interlibrary loans and special (medline) searches by computer at the National Library of Medicine upon request, circulated the table of contents of the 136 journals received in the Library to the professional staff, circulated resources to staff, and ordered, classified and catalogued books. As indicated below, the level of activity was slightly above that of FY 73.

LIBRARY ACTIVITIES

	FY 73	FY 74
Interlibrary loans secured	78	97
Medline searches secured	DNA*	2
Resources circulated to staff	DNA*	an average of 118 per month
Bibliographies compiled	DNA*	15
Additions to library resources		
classified and catalogued	376	373
Journal subscriptions received	124	136
(*Data Not Available)		

The Library's holdings consist of 2,451 books (this includes government publications) and 1,527 bound journal volumes.

NARCOTIC AND DRUG CONTROL

Problem:

Drug abuse causes physical and psychological dependency and can contribute to malnutrition, serum hepatitis and, indirectly, through the use of prostitution to support drug habits, to the spread of venereal diseases. Frequently criminal activity is a result of the abuser's need to finance his habit.

Objective:

To reduce the potential for drug abuse by effecting the closed distribution system for controlled substances.

Narrative:

A closed distribution system was effected to some degree in FY 74 in spite of continued budgetary problems. This was accomplished through implementation of a selective enforcement program and expansion of the scope of individual inspection and auditing procedures. While this

program resulted in a reduction in the number of inspections and audits performed, the total effectiveness was increased.

Program Activities were as indicated in Tables I and II.

TABLE I — PROGRAM ACTIVITIES

	Registrants*		Inspections		Audits		Consultations Concerning Discrepancies	
	FY 73	FY 74	FY 73	FY 74	FY 73	FY 74	FY 73	FY 74
Pharmacies	665	693	411	398	24	9	131	236
Physicians	2,537	2,742	61	8	8	2	5	9
Physician Groups	12	12	1	0	1	0	—	—
Osteopaths	5	8	0	0	0	0	—	—
Dentists	659	729	6	2	0	0	—	2
Veterinarians	182	183	1	1	0	0	—	—
Distributors	23	15	0	0	0	0	—	—
Manufacturers	5	4	1	0	0	0	—	—
Hospital/Clinics	124	170	22	8	0	0	6	5
Teaching Institutions	4	7	0	1	0	0	—	1
Researchers	13	12	1	0	0	0	—	—
Analytical Laboratories	5	5	0	0	0	0	—	—
Eclectic Physicians	1	1	0	0	0	0	—	—
Podiatrists	8	11	0	0	0	0	—	—
	4,243	4,592	504	418	33	11	142	253

* All persons engaged in the manufacture, distribution, research or dispensing of controlled substances are required to be registered annually.

TABLE II — DIVERSION INVESTIGATIONS

	FY 73	FY 74
Complaints investigated	453	454
Prescription forgery investigations	NRD	158
Prosecutions resulting from investigations	51	68
Investigations pending	183	197
Investigations closed	217	189
Forged prescriptions acquired as evidence	1,576	1,238

Thirteen additions were made to the list of controlled substances, two such additions being on the State level only.

No appropriations have been allocated for enforcement of the law concerning misbranding/adulteration of drugs and devices. All complaints have been referred to federal authorities where applicable. However, because many instances of violations of drug and device laws do not involve interstate transportation, effective enforcement cannot be accomplished without increased funds for State participation.

NUTRITION

Function:

To coordinate, strengthen, plan, set standards and monitor for quality in nutrition services in all agency programs which have a nutrition component. (Personal health services, home health services, health facilities and services and school health.)

Significant Activities:

Even though the number of public health nutritionists completing training increased this year, eight vacant positions were not filled because of a lower salary scale than most states.

At the end of FY 74 there was one nutritionist per 312,500 population. The desirable ratio is one nutritionist per 50,000 population.

Nutritionists	FY 72	FY 73	FY 74
Full-Time	7	6	5
Part-Time	5	4	3

One part-time nutritionist and one full-time nutritionist counseled Home Health Service patients in twenty-two counties. A part-time nutritionist counseled diabetic and heart patients in the Medical University Out-Patient Department.

Limited nutrition counseling was given to patients in Prenatal, Child Health and Crippled Children's Programs in twenty-seven counties. There were no nutritionists on health district staffs to provide nutrition services in all district programs with a nutrition component. Activities of nutritionists included:

	FY 73	FY 74
Clinics Attended	698	598
Individuals Counseled (normal & modified diets) .	4,466	3,730 ^{1,2}
Home Visits With Nurse (normal & modified diets)	374	353
Visits to Dietary Departments in Nursing Homes	107	70 ³
Posters and Exhibits Developed	44	23
Groups:		
Clinic	60	32
Number in Attendance	1,074	260
Health Department Personnel		
In-Service	41	26
Number in Attendance	227	291
Other Medical Personnel — Hospitals		
Private Clinics	6	14
Number in Attendance	67	164
Other Agencies & Organizations	35	22
Number in Attendance	1,087	675

¹ One nutritionist on sick leave more than 2 months.

² One nutritionist discontinued individual counseling in prenatal clinics.

³ Only one dietetic specialist for eleven months of FY 74.

A Federally Funded special supplemental food program for women, infants and children (WIC), which provided clinic services and iron fortified formula and cereal, and juice for infants; milk, eggs, highly fortified cereal and juice for children to age four and pregnant and lactating women who are in nutritional need was begun.

The WIC program in Lancaster County was selected as one of twenty projects in the United States to participate in a complete medical evaluation. The following counties and clinics were designated as partial medical evaluation programs: Appalachia II (Greenville and Pickens), Charleston, Florence, Richland, McCormick, Wateree (Clarendon, Kershaw, Lee) and Franklin C. Fetter Health Center.

PERSONNEL

Function:

To participate in the formulation, implementation and administration of personnel policies of the agency including job classification and compensation, merit system administration, recruiting, payroll preparation, employee benefits, personnel records maintenance, and equal employment opportunity.

Significant Activities:

The major services provided by this supportive service are position classification and compensation, recruitment, and merit system administration. Activities conducted in these areas, in comparison to FY 1973, are indicated in the following table.

PERSONNEL ACTIVITIES

	FY 73	FY 74
<i>Appointment:</i>		
Number of employees at beginning		
of period	(2,478)	(2,806)
Permanent and probationary	2,374	2,730
Other	104	76
Accessions during the period	(700)	(772)
Original probationary	498	551
Temporary from registers	9	5
Provisional	0	4
Emergency	8	50
Transfer and reemployments	94	53
Other	91	109

Number of changes from non-merit		
to merit status during period	264	115
Number of promotions during period	263	596
Number of employees at end of period	(2,806)	(2,859)
Permanent and probationary	2,730	2,764
Exempt	41	50
Other	35	45

Recruitment:

Number of vacancies at end of period		
Administrative, professional, technical	119	375
Other	112	199

Classification:

Number of classes at end of period	247	285
Number of classes revised during period	100	46
New classes established		31

Compensation:

Number of classes with salary		
revision during the period	52	31
Number of accessions above the		
minimum rate during the period	118	123

Layoffs and separations:

Number of separations during period	(372)	(719)
Resignations	309	491
Permanent	0	0
Probationary	0	0
Other	23	118
Retirements	24	30
Other	16	80

PUBLIC HEALTH NURSING

Function:

Provide overall direction and coordination for public health nursing services in obtaining program objectives; and participate in general policy and program development.

Significant Activities:

State and associate directors of nursing provided input, including leadership, coordination, planning, evaluation and policy making, in all personal health service programs. Objectives for the overall nursing service were written to insure good nursing practice.

The district nursing staff contributed, significantly, to program planning, development, policy and evaluation, to classification and to training procedures in addition to their supervisory and coordinating functions.

In order to provide up-to-date, relevant information on nursing services, including time and activities, on all levels, a data collection and reporting system was maintained. New tools for improving services to patients are continuously sought. One of the tools currently being tested in one district is the problem-oriented patient record.

In addition to setting practice and productivity standards for nursing personnel in one major program, a beginning was made in developing standards for measuring quality. Towards this end, discussions were held to evaluate the standards for nursing practice developed by national and state professional groups in relation to their implications and applicability for nursing practice in this agency.

Needs for appropriate numbers and level of staff were reviewed based on recommended nurse-population ratios, actual home visits, school visits and clinic caseloads of nurses, changes in programming, and changes in role functioning (such as the expanded role of the nurse practitioner). Table I shows the nurse population ratio by district.

TABLE I — REGISTERED NURSE-POPULATION RATIOS BY DISTRICTS*

Districts	Estimated Population	No. of R.N.'s	Ratio
Appalachia I	155,500	24	1:6479
Appalachia II	324,800	72	1:4511
Appalachia III	225,700	47	1:4802
Catawba	197,700	41	1:4822
Central Midlands	398,400	60	1:6640
Low Country	111,200	31	1:3587
Lower Savannah	219,000	56	1:3911
Pee Dee	269,000	75	1:3587
Trident	353,400	60	1:5890
Upper Savannah	159,800	34	1:4700
Waccamaw	149,200	29	1:5145
Wateree	162,300	45	1:3607
Total	2,726,000	574	1:4749

*Note: The recommended standard is one nurse per 2,000 population.

The educational and experience levels of administrative and supervisory staff are important measures of adequacy of staffing. Eighty percent of our state office administrative staff and 50 percent of the District Nursing Directors have graduate degrees. Another 12.3 percent of the staff have bachelors degrees and the remainder of the registered nurses on staff have associate degrees or diplomas in nursing.

We are working towards fuller use of teams as the basic unit for

delivery of direct services to patients and families. There are approximately 147 nursing service teams in operation in the twelve health districts. All team leaders are registered nurses. Another registered nurse, one or more licensed practical nurses and one or more nursing assistants complete the team, but social workers, nutritionists, and physical therapists are available as part of the public health team to provide special services as needed.

On January 1, 1973, there were 574 registered nurses, 70 licensed practical nurses and 51 home health aides, 101 community health aides and 19 nursing assistants for a total staff of 815. On January 1, 1974, the total nursing personnel was 586, a difference of 229.

A total of 124,499 persons were served by nurses through selected categorical programs. In addition, nurses served individuals throughout the state in 646,436 clinic visits. For details, see reports of personal health services programs.

Two programs to give nurses more depth of training, particularly in physical assessment and in management of minor illnesses within the framework of protocols developed by preceptor physicians, have developed within our state. As a result of these and some out-of-state programs, we now have 25 nurse practitioners placed in six different districts. There were six nurse practitioners on the staff last year.

After assessing staffing needs and staffing resources a determination was made of needed additional inservice and continuing educational programs to upgrade and maintain competence of current staff. A "Plan for Orientation of New Staff Nurses", and a check-off list and evaluation forms for use by each nurse relative to her respective orientation were developed. In collaboration with the state schools of nursing, three courses in "Basic Concepts of Public Health Nursing" were attended by a total of forty-six nurses with no previous public health training. Need was identified and plans initiated to have a workshop for team leaders. Short continuing education and inservice programs tailored to meet specific needs within programs were conducted.

The State Director of Nursing served as preceptor for two graduate students for this past school year. In addition, personnel from the Office of Nursing helped plan and teach courses in the colleges of nursing for their students and our staff, identified some areas of practice needing research, and represented nursing in agency and community policy-making committees.

SOCIAL WORK

Function:

Provide the amount and quality of social work staff support needed to attain program objectives; provide over-all direction and coordination for social work staff and services; participate in general policy and program development.

Significant Activities:

The need and demand for additional social workers continues to be greater than available supply. Deterrents to recruiting have been lack of competitive salaries at all levels in the agency's social work series, delays in getting decisions through personnel system, a highly competitive and increasing demand for master's degree social workers, and scarcity of social workers interested in locating in the rural public health districts. Through summer internships and the stipend program, four master's level social workers will be available for employment upon graduation in May, 1975.

There is social work staff in eight of the public health districts, five of which are staffed with a qualified social work director.

Type Degree	FY 73	FY 74
MSW	32	34
BA	9	10
Total	41	44

Social Workers in public health function as a member of a multi-discipline team in planning, implementing and evaluation of services at the state, district and county levels of operation. Social Work services are provided to individuals and families through clinics and hospital structures, home visits, interagency conferences, interagency referrals; the social worker provides consultation to team members, administrators of health care facilities, and other community agencies; the social worker participates in related community activities, i.e., advisory groups, planning councils, various committees. Reported social work activity reflects an increase over previous years:

	FY 73	FY 74
Direct Services Cases	11,931	15,854
Assessment and Diagnostic Interviews	11,342	13,077
Home Visits	1,582	2,103
Referrals to Community Resources	2,375	2,683
Consultations	1,842	2,280
Community Related	482	758

TRAINING

Function:

To coordinate and plan for all training activities within the Agency. Design training programs to improve employee efficiency and provide career development.

Significant Activities:

Type Training Activity	Number Participating
Management by Objectives (2 Courses)	136
Human Relations in Business, University of S. C.	28
Orientation for New Employees	156
Secretarial Training (Desk Set)	127
Driver Training	37
Secretarial Techniques	26
District Administrators Training (Greenville)	31
District Administrators Training (Waccamaw)	29
District Orientation:	
Waccamaw	47
Wateree	35
Low Country	31
Appalachia	43
Pee Dee	42
Trident	48
Midlands	41
Skit — Secretaries "See Yourself"	216
Letter and Report Writing	71

VITAL RECORDS

Function:

To collect baseline health related data on a routine basis by legal registration and statistical recording of vital events of birth, death, fetal death, marriage, divorce and annulment; to provide certification of these events upon request to the public.

Significant Activities:

Approximately 2 million records have been processed for automating the vital records system. There are approximately 1.1 million records to be processed in addition to about one-half million corrections, amendments, and delayed records.

Microfiche indices of marriage and deaths were completed. The statewide index of death records and retrieval equipment were distributed to the county health departments. Current indices (1974 births and deaths) are being furnished county health departments monthly.

All coding and keying instructions have been revised and are compatible with National Center for Health Statistics standards.

There is a reduction in the late reporting of birth records (43.6% in 1972 and 38.9% in 1973). This was due to training provided to hospital personnel and deputy county registrars.

Special requests for statistical services for the past fiscal year included:

- a. Research in the area of cancer mortality differentials by geographic location.
- b. Research into the area of low birth weight infants in South Carolina.
- c. Dissemination of data to various other governmental agencies, including: Office of the Governor, Department of Education, Division of Research and Statistical Services, Division of Planning, Research and Grants, Department of Social Services, National Safety Council, as well as other local, state, federal offices, radio and television news, and program directors of Department of Health and Environmental Control.

TABLE I — COMPARISON OF VITAL EVENTS,
CY 1972 AND CY 1973

	Total Number			Rates	
	1972	1973	Percent Change	1972	1973
<i>Live Births</i>	49,951	48,922	-2.1	18.7	17.9
Premature	4,533	4,404	-2.8	90.7	90.0
Illegitimate	8,387	8,778	+4.7	167.9	179.4
<i>Deaths-All Causes</i>	23,920	24,871	+4.0	9.0	9.1
Fetal	791	809	+2.3	15.8	16.5
Neonatal	774	752	-2.8	15.5	15.4
Maternal	20	18	-10.0	4.1	3.7
Infant	1,126	1,105	-1.9	22.5	22.6
Marriages	59,983	56,876	-5.2	22.5	20.9
Divorces and Annulments	7,646	8,264	+8.1	2.9	3.0

Live birth, death, divorce and annulment, and marriage rates per 1,000 population (1972 and 1973 estimated population).

Maternal death rate per 10,000 live births; infant, neonatal and fetal death, premature, and illegitimate birth rate per 1,000 live births.

The increase reflected in Table I of fetal deaths is not believed to be an actuality in the number of events, but rather a result of efforts to improve registration. This improvement was possible through the en-

forcement of requirements for burial-removal permits which enabled follow-up when the events were not registered.

TABLE II — VITAL STATISTICS ACTIVITES

	FY 73	FY 74	Percent Change
<i>Total Certificates Filed*</i>	(137,630)	(134,245)	-2.5
Births	48,612	46,500	-4.3
Deaths	23,992	23,840	-0.6
Fetal Deaths	790	735	-7.0
Marriages	56,626	54,914	-3.0
Divorces and Annulments	7,610	8,256	+8.5
<i>Total Records Queried</i>	(4,147)	(4,253)	+2.6
Births, Deaths, and Fetal Deaths	1,822	1,873	+2.8
Marriages	599	611	+2.0
Divorces and Annulments	1,726	1,769	+2.5
<i>Certification Services</i>			
Completed Requests	(94,757)	(91,749)	-3.2
Adoptions	1,869	2,019	+8.0
Court Orders	889	1,156	+30.0
Legitimations	1,634	1,683	+3.0
Corrections	6,115	6,376	+4.3
Delayed Certificates	2,036	2,035	0.0

* These figures are taken from monthly activity reports; therefore, do not necessarily refer to current figures for events which occurred in specific period.

VOLUNTEER SERVICES

Function:

To complement the services of the health facility staff and to offer to the volunteer opportunities for the use of special skills, experience, knowledge and education.

Significant Activities:

Volunteers served as community health aides, receptionists, clerks, and clinic aides. Their activities for the fiscal year were as follows:

VOLUNTEER ACTIVITY

Program, Service or Activity	No. of Volunteers	No. of Hours
Maternity	59	206
Family Planning	63	418
Child Health	102	445
Crippled Children	58	272

Program, Service or Activity	No. of Volunteers	No. of Hours
Adult Health	94	318
Home Health	266	910
Immunization Assistance	87	271
Other	<u>108</u>	<u>511</u>
Total	837	3,351

The above is an estimate since all volunteer services were not recorded.

ADDICTIONS PROJECT

Problem:

Based upon national statistics, approximately 138 of the Agency's 2,600 employees are affected by the use of alcohol. An indeterminate number of employees work performance is reduced by other personal problems.

Objectives:

- To instruct supervisors of their responsibilities in this project in implementing the agency's Counseling and Referral Elective (CARE) policy.
- To identify the employees whose work performance is adversely affected by the use of alcohol.
- To refer identified employees to a helping resource (Counseling and Referral Elective — CARE; the Area Mental Health Center; the Agency's Medical Advisor; or a private physician).

Narrative:

In conjunction with the Commission on Alcohol and Drug Abuse and several other state agencies, personnel of this project assisted in twenty-six seminars attended by two hundred ninety-two supervisors including seventy-three from this Agency.

During the year, eleven employees were referred to a helping resource; others have received counseling, or referral to other resources.

Other Significant Activity:	Number
Educational programs conducted	12
Attendance of educational programs	1,032
County Alcohol Abuse plans evaluated	28
Alcohol projects on site evaluations	6

Other Significant Activity	Number
Training seminars attended	8
People visiting exhibition at S. C. Public Health Asso. Meeting	1,060
Informational Literature Distributed	9,045
Projects written or assisted in writing	1

CANCER CONTROL

Problem:

An estimated 3,500 persons, 33% of whom will be medically indigent, will die of cancer each year in South Carolina. Cancer is the state's second leading cause of death. Many of these deaths will be due to failure to detect the disease early and to treat and follow-up those diagnosed.

In calendar year 1973, 5,491 new cases of cancer were diagnosed and reported, 1,127 medically indigent and 4,364 private patients. During CY 73, 3,688 persons died from cancer in comparison to 3,445 in CY 72.

Objective:

To prevent cancer morbidity and mortality through education, early casefinding, differential diagnosis, treatment and follow-up through the State-Aid Cancer Clinic and to promote early detection of cervical cancer.

Narrative:

Cancer clinic activities, as indicated in the following table, were generally higher than last year.

TABLE I — CANCER DATA

	FY 73	FY 74
No. new patients referred by physicians	1,351	1,387
No. new patients admitted for services	1,064 ¹	1,191
No. found to be non-malignant	185	292
No. patient visits	17,146	18,812
No. of outpatient services*	19,907	28,970
No. patients hospitalized	662	631
Total hospital days	5,337	4,725
Average no. of days hospitalized	8	7
Average cost/hospital day	\$88.	\$95.

(*Includes x-rays, laboratory procedures, biopsies, pap smears and radiation therapy.)

(¹Corrected from FY 73 Annual Report.)

The number of new and old cases seen and followed in the various clinics is as follows:

TABLE II — PATIENTS SERVED BY CANCER CLINICS

	FY 73			FY 74		
	Clinic	Private	Total	Clinic	Private	Total
Anderson	517	2,382	2,899	550	2,354	2,904
Baptist	301	2,530	2,831	313	2,318	2,631
Greenville	546	2,031	2,577	565	3,141	3,706
Med. University	1,992	2,820	4,812	2,008	2,586	4,594
McLeod	731	855	1,586	955	804	1,759
Orangeburg	210	1,117	1,327	236	460	696
Richland Men.	502	1,408	1,910	673	1,124	1,797
Self Mem.	128	1,352	1,480	105	1,431	1,536
Spartanburg	523	3,324	3,847	514	2,105	2,619
Tuomey	61	609	670	61	51	112
Total	5,511 ¹	18,428	23,939	5,980	16,374	22,354
Total Clinic Visits	17,146	Total Clinic Visits		18,812		

¹Corrected from FY 73 Annual Report.

Early detection of cervical cancer has been promoted through the counties by means of "pap" smears. The "in-situ" and "localized" figures in the following table are indicative of increased early detection.

TABLE III — NEWLY REPORTED CASES
BY STAGE OF DISEASE

	CY 72		CY 73	
	No.	%	No.	%
In-situ	47	0.9	91	1.6
Localized	2,782	50.6	2,911	53.0
Regional	1,636	29.8	1,412	25.8
Remote	931	16.9	951	17.4
Unknown	97	1.8	126	2.2
Total	5,493	100.0	5,491	100.0

CHILD EVALUATION

Problem:

There are an estimated 13,514 retarded children (3% of children) under nine years of age in South Carolina who need to be identified, verified and properly placed. Additionally, the approximately 26,000 parents of these retarded children need counseling.

Objectives:

During FY 74 to provide a comprehensive evaluation of 150 children (new referrals) in the state under nine years of age who are suspected of being mentally retarded in order to help each of these children attain his (her) maximum potential. To provide counseling services to parents and patients.

Narrative:

All patients received a comprehensive evaluation by a multidisciplinary team (medical, psychological, and social). This evaluation included medical and social histories, physical examination, auditory and visual screening, urine screening for metabolic diseases, photographs and handprints, assessment of social and self-help skills, laboratory and x-ray studies as required, and intellectual functioning. A staff team conference was held on each patient to coordinate all findings and make recommendations as indicated for medical consultations or referrals, speech and hearing evaluation, chromosome studies, proper school placement, and referral to appropriate resources for additional care. A total of 244 home visits were made for observation, instruction and reinterpretation of clinic findings during FY 74.

Approximately 341 parents of retarded children were counseled in order to help them accept and encourage their mentally retarded child and to attain a reasonable adjustment to their individual situations.

Genetic counseling by a medical geneticist was provided to 24 patients and their families. Chromosome studies were obtained on 29 individuals.

CHILD HEALTH MAINTENANCE

Problem:

There are an estimated 154,000 children in South Carolina eligible for and in need of public health services. At least one-half are not receiving any kind of service. Failure to provide care for all those in need contributes to a relatively high infant mortality rate and in physical, developmental, and behavior problems in the children.

Objective:

To provide Child Health Conference services to 12,000 children at periodic intervals (1, 3, 6, 12, and 18 months and annually thereafter until 6 years old) or as indicated by need. (See Table I.)

Narrative:

The Child Health Conference Clinic services include history, physi-

cal appraisal, Denver Development Screening Test, immunizations, laboratory tests, vision and hearing screening, and tuberculin tests. Additionally, parents are counseled regarding normal growth and development, including anticipatory guidance, abnormal findings, and recommendations. In some cases social work and nutrition services are utilized.

Activities in the Child Health Conferences are indicated in the following three tables.

TABLE I — NUMBER PATIENTS SERVED AND NUMBER CLINIC VISITS TO CHILD HEALTH CONFERENCES, BY DISTRICT

District	No. Served		No. Clinic Visits	
	FY 73	FY 74	FY 73	FY 74
Appalachia I	698	548	975	613
Appalachia II	1,021	1,161	1,225	1,630
Appalachia III	671	619	1,120	705
Catawba	416	508	563	607
Central Midlands	1,510	2,011	2,201	2,811
Low Country	301	315	428	479
Lower Savannah	878	973	1,484	1,602
Pee Dee	624	475	869	646
Trident	8,102	6,253	18,877	15,305
Upper Savannah	328	580	400	735
Waccamaw	269	111	378	124
Wateree	636	751	1,148	1,385
State Totals	15,454	14,305	29,668	26,642

TABLE II — STATEWIDE TOTALS BY AGE CATEGORY SERVED FY 74 IN CHILD HEALTH CONFERENCES

Age Categories	No. People Seen in CHC	No. of Visits	Average Visit Per Child
Under Age 1	4,673	11,683	2.5
1 — 3	5,249	8,469	1.6
4 — 5	1,511	2,671	1.4
Above Age 5	1,549	2,171	1.4
Not Stated	923	1,648	1.8
Total	14,305	26,642	1.9

TABLE III — STATEWIDE TOTALS BY SPECIFIC TESTS

	FY 73	FY 74
Number of Parasite Tests	1,307	1,929
Number of Tuberculin Tests	2,969	2,799
Number of Vision Tests	1,373	1,489
Number of Auditory Tests	1,308	1,591
Number of Hemoglobin Tests	7,404	8,014
Number of DDST Tests	<u>1,347</u>	<u>2,156</u>
Total Tests	15,708	17,978

As a result of these conferences, and the district referral diagnostic pediatric clinics, there were 271 congenital malformations and birth injuries (definite or suspected) identified which were not detected and referred via the birth registry system. Comparison with the previous year is as follows:

Conditions Detected	FY 73	FY 74
No. congenital malformations and birth injuries	282	271
No. growth and developmental problems	845	740

Nutrition counseling was provided to 1,010 individuals and 44 home visits were made concerning normal and modified diets. Records of infants and children who were counseled two or more times by nutritionists for such nutritional problems as iron deficiency anemia, overweight, and underweight revealed that 74.3% improved after counseling and the remainder showed no change.

Objective:

To provide home follow-up to children on a selective basis.

Narrative:

Home visits are provided to selected children such as infants with early discharge from the hospital, children with special problems, premature infants, and those delivered by lay midwives. A total of 2,434 visits were made of 2,450 projected.

Objective:

To provide Early and Periodic Screening, Diagnosis and Treatment services (EPSDT) to 35,000 of the Title XIX eligible recipients 0-21.

Narrative:

Screening services include history, physical appraisal, Denver Developmental Screening Test if indicated, counseling and guidance, im-

munizations, laboratory tests, vision and hearing screening, tuberculin test and sickle cell testing on a voluntary basis. A total of 31,082 were screened compared to 30,580 in FY 73.

Selected services provided included sickle cell testing of 8,415 children, immunizations for 18,270 and parasite testing of 16,938. Of all children served, the percent with abnormal findings were: vision 12.9%; hearing 1.7%; dental 50.8%; sickle cell 0.1%; lead - negligible; other 34.9%.

The 31,082 Title XIX eligible children and youth screened falls short of the estimated 35,000 to be screened fiscal year 1974. One major factor influencing the number screened is the statewide 40% no show rate. An examination of the individual counties reveals that the percentage of appointments kept varies from 100% in some areas to less than 50% in others. Twenty-three (23) of the forty-six (46) counties met their FY 74 quota as determined by the Department of Social Services.

Objective:

To provide diagnostic evaluation and limited treatment services by a pediatrician on a district basis to children upon referral from child health conferences, school nurses, and private physicians.

Narrative:

The number of children served in pediatric clinics in FY 74 was 3,708, an increase of 320 over FY 73, and over 700 more than the number projected to be served.

CRIPPLED CHILDREN

Problem:

The normal growth and development of children may be affected by handicapping conditions if left untreated. Many handicapping conditions require highly specialized and often long term treatment for correction or maximum rehabilitation. Many children have multiple handicapping conditions. Failure to identify and treat children with handicapping conditions reduces the possibility of their becoming productive citizens, and may hinder or preclude their achievement of normal growth and development.

Objective:

To correct conditions in children and/or maximally rehabilitate children under twenty-one years of age who have handicapping conditions which come within the scope of the program.

Narrative:

Quality services were provided to 7,680 patients during FY 1974.

TABLE I — CASELOAD

	FY 73	FY 74
Number of Cases Open (Beginning of Year)	7,252	7,246
Applications Received During Year	1,702	1,934
New Cases Registered	1,636	1,869
Cases Rejected as Diagnostically Ineligible	66	65
Cases Removed from Caseload (See Table II)	1,802	1,652
Number of Cases Reopened	160	217
Number of Cases Open (End of Year)	7,246	7,680

The caseload at the end of the year increased by 434 patients over FY 73. This is due, in part, to the transfer of pediatric cardiology patients formerly followed in State Adult Cardiology to the Crippled Children's Program, and the acceptance of a limited number of patients with metabolic disorders, including Diabetes Mellitus.

Of the new patients registered on the program during the fiscal year, 442 were closed as compared to 268 closed during FY 73. The additional cases closed within the same year is probably due to an increase in per capita income and broader insurance coverage of some applicants allowing certain families in higher income brackets to obtain care through the private sector.

One new clinic was established in the Catawba District, bringing the total to nine Crippled Children's Clinics, strategically located throughout the State.

Orthopedic conditions, broadly defined, constitute approximately 45% of the conditions present, with heart conditions—excluding rheumatic fever—representing 9%, neurological and seizures representing 10%, and hearing impairments representing 8%. The orthopedic component of the program continues as the largest single entity; however, the non-orthopedic components have accounted for a greater expenditure of funds and comprise almost 55% of the caseload. There was a slight increase (1.5%) in the total number of children in FY 74 having multiple handicapping conditions.

Table II indicates the reasons for discharge of all patients of the program and Table III gives the age distribution of newly registered patients.

TABLE II — REASON FOR DISCHARGE, ALL PATIENTS

Reason for Discharge	FY 73		FY 74	
	No.	%	No.	%
Medically Ineligible	206	11%	225	14%
Financially Ineligible	95	5%	83	5%
No Further Treatment Indicated Under				
CC Program	142	8%	91	6%
Cured, Condition Corrected	394	22%	420	25%
Discharged to Care of Another Program				
or Agency	157	9%	127	8%
Discharged to Private Care	54	3%	88	5%
Moved Out of State	180	10%	136	8%
Deceased	76	4%	86	5%
Parent's Request	87	5%	76	5%
Unable to Locate	45	3%	41	2.5%
Over Age	135	7%	123	7.5%
Other	<u>231</u>	<u>13%</u>	<u>156</u>	<u>9%</u>
	1,802	100%	1,652	100%

TABLE III — AGE DISTRIBUTION
OF NEWLY REGISTERED PATIENTS

Age at Registration	FY 73		FY 74	
	No.	%	No.	%
1	490	30%	495	27%
1-3	460	28%	511	27%
4-12	489	30%	621	33%
13-20	195	12%	242	13%
Unknown	<u>2</u>		<u>0</u>	
Total	1,636	100%	1,869	100%

The increased proportion in groups over 4 years is due, in part, to the transfer of approximately 180 cardiac patients from Adult Heart to Crippled Children Pediatric Cardiology Clinics.

In FY 74, 1,283 patients received counseling by social workers. Social workers participated in 69 team conferences, and attended 105 clinic sessions. There were 2,508 direct patient contacts, 220 team conferences and 174 clinics attended. Social workers in the clinic assisted patients and parents in dealing with problems related to acceptance of and adjustment to the child's illness and the stresses arising in the family due to the illness.

During FY 74, 856 patients were seen by a nutritionist in 147 clinic sessions compared to 831 patients served in 145 clinic sessions in FY 73.

A summary of Program activities is given in Table IV.

TABLE IV — PROGRAM ACTIVITIES

	FY 73	FY 74
No. children seen in Clinic	6,490	6,644
No. Clinic visits	16,311	16,333
No. children hospitalized	1,007	1,073
No. hospital days	8,928	10,308
Avg. hospital days/pt.	8.9	9.6
Avg. cost per hospital day	\$120.10	\$133.20
No. children provided convalescent center care	118	133
No. days convalescent center care	8,028	7,455
Avg. convalescent center days/pt.	68	56
Avg. cost convalescent center case	\$31.35	\$38.10
No. children provided consultation services	686	572
No. consultative services provided	1,519	1,106
No. children attending summer camp	394	414
No. Home & Office visits by PHN	9,308	10,000
No. patients served during Home & Office visits	5,095	5,552

Objective:

To provide services to children with certain handicapping conditions not now covered.

Narrative:

Provision of Cryoprecipitate and other blood products to patients with hemophilia was initiated during the year. The program was also expanded to include selected cases of Diabetes Mellitus.

Objective:

To improve quality care of patients through a team audit, by district, annually.

Narrative:

On site team audits were conducted in 12 Health Services Districts in an effort to improve methods of monitoring and measuring program services from both a quantitative and qualitative standpoint. The results of these audits have not yet been fully analyzed.

DENTAL HEALTH

Problem:

The level of dental health among the entire population of the State has much room for improvement. Fully 40% of the population finds it very difficult to obtain any dental service whatsoever, while 20% depends on the formalized governmental supported programs for dental

service. The remaining 40% receives routine dental care from private dental practitioners. Many persons in the State have not been exposed to knowledge concerning preventive dentistry, and even many of those who have been exposed are not using it or applying it successfully or correctly.

Objective:

To assist in the expansion of corrective service programs in the State.

Narrative:

Assistance provided is indicated in Table I.

TABLE I — DENTAL CLINIC ACTIVITY FY 73 and FY 74

Location of Clinic	Number of Patients		Total Treatment	
	FY 73	FY 74	FY 73	FY 74
Aiken County.....	1,366	982	1,421	770
Richland County (Ridgewood School).....	525	600	958	973
State Park Health Center	272	54	474	93
TOTAL	2,163	1,636	2,853	1,836

Emphasis in Aiken County shifted from care to prevention and this is reflected in the reduction of clinical care by approximately 50%. A new dentist has been hired for the program at State Park Health Center to correct the curtailment of the program that occurred during FY 1974.

Objective:

To establish by July 1, 1974, a dental care program in a health district.

Narrative:

During the latter part of fiscal 1974, the Pee Dee District was selected for the establishment of a dental health program. Plans for this program, entitled "Pee Dee Dental Health Project", were approved, financial support provided, and equipment and supplies were ordered. An agreement was made with a recent dental graduate, that upon his successfully obtaining his South Carolina license, he would be employed on a clinical session hourly basis for the communities of Florence and Darlington.

Objective:

To stimulate four additional communities to fluoridate their water systems.

Narrative:

Since July 1, 1973, the towns of Lexington, Bennettsville and Walhalla, serving approximately 21,000 persons, started the fluoridation procedure. The fourth community, Timmonsville, delayed the procedures so that they will not be started until fiscal 1975.

Objective:

For the prevention of dental disease: Teach preventive dental health programs of plaque control during school year 1973-74 to 25,000 school children, and to promote and support dental health education procedures in the State.

Narrative:

A total of 61,488 plaque control kits were distributed to school children and to children in Head Start, day care centers, and community action programs. All recipients received basic instruction on dental care. Some 30,000 children, including 19,458 who received plaque control instruction by identifiable dental personnel, received additional instruction on the use of the kit.

In furtherance of dental health education, eleven teacher workshop sessions, with 387 teachers in attendance, were promoted and conducted. Lectures were conducted with 256 teachers attending. Dental hygiene training was promoted for 3,100 children in Lexington County, and some 75,000 guides and materials were distributed statewide.

Objective:

To provide consultation, assistance and information to private citizens of the State; to official agencies; and to personnel within this Agency in the establishment, promotion and operation of dental programs.

Narrative:

Central Office personnel provided consultative support and assistance in dental programs throughout the State. During fiscal year 1974, assistance was provided in the development of programs for dental care in the Greenville and Charleston County Health Departments, two Community Action programs (Orangeburg and Rock Hill), and with the Columbia Technical Education Center. A majority of patients receiving services in these areas have been referred from the Department of Social Services.

Dental health lectures, demonstrations and oral hygiene procedures were presented to 300 parents and children upon the request of personnel of Wateree Community Action. In addition, consultation was provided the Directress in planning for expansion of clinical services to

recipients of Wateree Community Action. Consultation and equipment was provided to Carolina Community Actions, Inc., Rock Hill, Beaufort-Jasper Comprehensive Health Services, Columbia Urban League, Midlands Technical Education Centers and Orangeburg-Calhoun Comprehensive Health for development and/or expansion of services.

The division staff works closely with the Division of Crippled Children, DHEC, in interpreting dental fees for reviewing treatment plans and providing recommendations for treatment of children on the crippled children's program.

Objective:

To determine the effectiveness of the educational programs as related to the oral hygiene level of individuals.

Narrative:

The effectiveness of plaque control programs was assessed in the Aiken area, Lexington School District No. 2, and in Appalachia III sections of the State. The baseline determination of the PHP (Patient Hygiene Performance) index was accomplished in the Pee Dee District. The program in the Appalachia III District brought to our attention that girls achieved a greater improvement in oral hygiene level than did the boys, but both sexes showed marked improvement.

The oral hygiene levels, as measured by the Patient Hygiene Performance (PHP) index, show an improvement when the measurement obtained after the educational program is compared with the baseline index. A lower PHP indicates improvement.

TABLE II — PHP

	No. Children	PHP Base	PHP After Education	% of Change
6th grade	160	3.3	2.1	-36%
3rd grade	146	3.4	2.7	-20%
Total	306	3.4	2.4	-29%

EARLY DISEASE DETECTION

Problem:

Chronic diseases account for the majority of deaths in South Carolina and they are also a major cause of, or contributing factor to, disability. When properly diagnosed, the course of chronic disease can be affected favorably by drug control or behavior modification.

Objective:

To provide Early Disease Detection services to 9,000 South Carolinians.

Narrative:

Disease detection activities were conducted in several categories as indicated in the following table.

TABLE I — DISEASE DETECTION ACTIVITIES

Type Screening	Number Screened	
	FY 73	FY 74
Multiphasic	—	1,914
Adult Health	815	1,483
Diabetes	374	3,789
Hypertension	—	2,219

The multiphasic screening of state employees was conducted from November 1, 1973 through June 30, 1974.

Diabetes screening is available in all health districts.

Hypertension detection and control activities were conducted in Lee and Clarendon Counties of Wateree District during the period March 1 to June 30, 1974.

TABLE II — FINDINGS

Type Screening	No. Screened	No. With Abnormal Findings	% Abnormal Findings
Multiphasic	1,914	926*	48.3%
Adult Health	1,483	349*	23.5%
Diabetes	3,789	115	3.0%
Hypertension	2,219	290	13.1%

(*Individuals referred may have more than one abnormal finding.)

Of 264 referred in December and January, 185 were reported to have seen their physicians and 107 had started on a treatment regimen or were being followed.

Significant abnormalities detected in Adult Health screening were elevated blood pressures, elevated blood sugars, suspicious pap smears, and breast masses.

FAMILY PLANNING

Problem:

There are an estimated 115,860 women in need of family planning services, 77,461 of whom were not receiving services.

Objective:

To provide comprehensive family planning services to 57,095 women and 50 men during FY 1974. Sterilization is a component of family planning services.

Narrative:

Comprehensive family planning services for females includes a physical examination consisting of at least inspection and palpation of breasts, axillary glands, abdomen and extremities; blood pressure; weight; height, and pelvic examination; and, laboratory services consisting of hemotocrit and hemoglobin, urinalysis, papanicolau smears, culture for gonorrhea, and serological test for syphilis. Comprehensive services for men consist of health education and contraceptive services.

The number of persons served is indicated in Table I.

TABLE I — NUMBER MALE AND FEMALE PATIENTS SERVED

	FY 73	FY 74	% Change From FY 73
Male	N.A.	740	—
Female	38,399	55,926	+46%
Total	38,399	56,666	+46%

The number of males served is larger in FY 74 due to more accurate reporting, primarily from the Pee Dee District where there is a special family planning male involvement project.

Sterilization activities are indicated in Table II.

TABLE II — NUMBER MALE AND FEMALE PATIENTS STERILIZED

	FY 73	FY 74	% Change From FY 73
Male	20	49	+145%
Female	199	1,029	+417%
Total	219	1,078	+392%

The number of sterilizations provided was due to availability of additional funds later in the fiscal year and a greater demand by the public for sterilization as a permanent method of contraception.

The number of females served by district is shown in Table III.

TABLE III — FAMILY PLANNING SERVICES BY DISTRICT

District	*Number In Need	*Number In Need	Number Served	Number Served	Percent Of Need	Percent Of Need
	FY 73	FY 74	FY 73	FY 74	FY 73	FY 74
Appalachia I	7,864	4,840	874	1,132	11.1	23.3
Appalachia II	14,362	10,030	3,175	3,268	22.1	32.5
Appalachia III	12,859	9,150	3,002	3,822	23.8	41.7
Upper Savannah	9,570	6,230	2,362	3,116	24.7	50.0
Catawba	8,647	6,020	2,638	3,801	30.5	63.0
Midlands	20,671	13,790	4,240	7,228	20.5	52.4
Lower Savannah	13,908	10,580	3,989	5,298	28.7	50.0
Wateree	11,018	9,450	4,420	5,634	40.1	59.6
Pee Dee	17,910	14,460	6,176	7,296	34.5	50.4
Waccamaw	9,526	8,720	2,676	3,149	28.1	36.1
Trident	20,552	16,530	2,505	9,109	12.2	55.1
Low Country	7,760	6,606	2,342	3,073	30.2	50.7
State Total	154,647	115,860	38,399	55,926	24.8	48.2

* Number in need figure varies from year to year due to changing economic conditions in the state. Figures furnished by Planned Parenthood-World Population.

In general all females received comprehensive services as defined.

Objective:

To provide infertility counseling to 60 women and 30 men.

Narrative:

Counseling activities were as follows:

TABLE IV — NUMBER MALES AND FEMALES
RECEIVING INFERTILITY COUNSELING

	FY 73	FY 74	% Change From FY 73
Male	16	270	+1,588%
Female	16	270	+1,588%
Total	32	540	+1,588%

Infertility counseling exceeded expectations for both males and females due to increased emphasis being placed on providing the services and more accurate reporting.

HEART DISEASE CONTROL

Problems:

a. An estimated 337,103 men and 308,512 women in South Carolina have some form of heart disease (definite or suspected). Of these, approximately 33% are medically indigent.

b. An estimated 14,000 persons in South Carolina will die of cardiovascular disease in the next twelve months making it the leading cause of death in the state.

Objective:

To provide heart clinic services to medically indigent people as follows:

- a. Examine 1,000 persons for diagnosis of heart disease.
- b. Refer for treatment 950 persons with diagnosed heart disease.
- c. Provide prophylaxis for 150 persons who may be pre-disposed to heart disease.
- d. Provide follow-up care to 2,000 persons with diagnosed heart disease.

Narrative:

In heart disease clinics, 759 persons were examined, 646 treated, and 1684 followed up.

Findings among those examined were as follows:

TABLE I — COMPARISON OF NEW PATIENTS
SEEN IN CLINIC BY DIAGNOSIS

Diagnosis	FY 73	FY 74
Congenital	137	111
Hypertension	41	31
Rheumatic	124	129
Ischemic	160	223
Other Form-Heart Disease	103	141
Cerebrovascular Disease	2	0
Diseases of Arteries	11	7
Other Disease of Circulatory System	17	4
No Heart Disease	127	113
Total	722	759

The increase in ischemic and "other" diagnoses, and the decrease in congenital diagnosis, is a reflection of the relatively greater number of adult patients and correspondingly fewer patients under age 21.

TABLE II — HEART CLINIC ACTIVITIES

	FY 73	FY 74
Total Patients Served	1,779	1,684
Old Patients Served	1,057	925
New Patients Served	722	759
Total Clinic Visits	2,717	2,842

HOME HEALTH SERVICES

Problem:

People have illnesses and injuries that do not require professional services in an institution on a 24-hour basis but benefit from professional care on an intermittent basis. It is estimated that 10% of the population over 65 and 0.5% of those under 65 are in need of Home Health Services each year. In South Carolina, this represents 31,091 persons.

Objective:

To provide Home Health Services to 10,644 persons with services distributed as follows:

Service Component	# Persons
Nursing	10,644
Home Health Aide Service	1,003
Medical Social Service	382
Physical Therapy	975
Occupational Therapy	194
Speech Therapy	112
Dietary Service	394

Narrative:

Table I indicates the number of persons served by component and the per cent of objective met. While the number of persons served represents a 25.5% increase over FY 73, the number of visits made increased 15.6%.

Nursing service met 96.2% of the standard. Failure to meet the goal is attributed primarily to delays and inability to fill vacant positions. Improved supervision of Home Health Aides resulted in increased productivity and extension of the service to more people (114.8% of the objective). Obstacles in employment of new personnel, as well as insufficient funding of medical social work positions, prevented meeting the goal for medical social service (91.1%). Also, work expectations for the medical social worker are being reevaluated.

Physical therapy service exceeded the target (117.8%) due to the addition of staff physical therapists and the addition of contract personnel where previously the service had been unavailable or unobtainable. The failure to reach the target population for occupational therapy, speech therapy and dietary service was due to the unavailability of personnel in some districts.

TABLE I — NUMBER OF PERSONS SERVED BY
SERVICE COMPONENTS FY 1974

Service Components	Target Population to be Served	No. of People Served	% of Service Actually Utilized	% of Objective Met	No. of Visits
Nursing	10,644	10,237	100.0%	96.2%	153,295
Home Health Aide	1,003	1,151	11.2%	114.8%	21,812
Medical Social	382	348	3.4%	91.1%	884
Physical Therapy	973	1,146	11.2%	117.8%	5,239
Occupational Therapy ..	194	13	0.1%	6.7%	13
Speech Therapy	112	87	0.8%	77.7%	338
Dietary	394	279	2.7%	70.8%	374
Total					181,955

Table II indicates the per cent of need met in FY 74 and the per cent of change in number of persons served from FY 73.

TABLE II — NUMBER OF PERSONS SERVED AND PERCENT
OF NEED MET BY DISTRICT, FY 1974

District	# in Need	# Served		% Need Met		% Change
		FY 73	FY 74	FY 73	FY 74	# Served
Appalachia I	1,944	450	534	23.2	27.5	18.7
Appalachia II	3,629	847	1,145	23.3	31.6	35.2
Appalachia III	3,148	877	902	27.9	28.6	2.9
Upper Savannah	2,148	678	739	31.6	34.4	9.0
Catawba	1,954	529	687	27.1	35.2	29.9
Midlands	4,282	871	1,135	20.3	26.5	30.3
Lower Savannah	2,705	793	1,050	29.3	38.8	32.4
Wateree	1,839	550	650	30.0	35.3	18.2
Pee Dee	3,198	930	1,167	29.1	36.5	25.5
Waccamaw	1,633	364	530	22.3	32.4	45.6
Trident	3,383	891	1,133	26.3	33.5	27.2
Low Country	1,228	377	565	30.7	46.0	49.9
Total	31,091	8,157	10,237	26.2	32.9	25.5

IMMUNIZATION ASSISTANCE

Function:

To promote immunization services through technical assistance provided to local health departments and private physicians so that low immunization levels, especially among preschool children, will be improved, to monitor through improved reporting the immunizations administered in public health clinics and thus determine significant trends in protection of infants; to promote compliance with the school immunization law and assess immunization status of school enterers; to provide prompt epidemiological investigation of vaccine preventable diseases reported by physicians; to provide statewide mass immunization capability in event of an epidemic.

Significant Activities:

The public health immunization activities of this supportive service are indicated in Table I.

TABLE I — INDIVIDUALS COMPLETING IMMUNIZATIONS
BY TYPE OF IMMUNIZATION

Type of Immunization	FY 73	FY 74	% Actual Change FY 74 From 73
Polio	43,610	45,670	+4.7
DPT (or DT)	40,903	44,836	+9.6
Measles	39,075	46,402	+18.7
Rubella	44,490	51,249	+15.2

The increase in reported completed immunizations for individuals of all age is attributable to the school immunization law. During the initial period of school-law enforcement, there were approximately 1,200 school principals and kindergarten directors who were personally visited twice (total of some 2,400 visits) to explain the objectives and method of implementing the school law.

To improve reporting, an improved reporting procedure and a new form have been designed.

The status of kindergarten-first grade pupils enrolled in the school year 1973-1974 with a full certificate of immunization is shown in Table II.

TABLE II — NUMBER KINDERGARTEN-FIRST GRADE
STUDENTS ENROLLED 73-74 SCHOOL YEAR WITH
FULL CERTIFICATE OF IMMUNIZATION

	30 Days After School Opened		120 Days After School Opened	
	Total No. Enrolled	No. & % With Full Certificate	Total No. Enrolled	No. & % With Full Certificate
Public First Grade & Kindergartens	67,539	60,280 89.2%	68,362	65,691 96.1%
Private & Parochial First Grade & Kindergartens ..	9,116	8,553 93.8%	9,444	9,302 98.5%
Private Kindergartens	13,639	11,809 86.6%	14,630	14,293 97.7%
TOTALS	90,294	80,642 89.3%	92,436	89,286 96.6%

A survey of two year old children was conducted using a stratified random sample. The sample size was based on a 95% confidence level and a precision of $\pm 10\%$, and then inflated to account for not-at-homes, not locatables, etc. Within each strata a total of 150 children were randomly selected from each of 8 strata making a total sample size of 1,200. Since the eight strata represented different proportions of the state population of children 2 years old, these proportions were applied to each of the 8 samples to obtain a statewide percent. Information on 900 children was verified by type of vaccine and is presented in the following table. The percents in this table reflect the aforementioned weighting.

TABLE III — STATISTICALLY WEIGHTED IMMUNIZATION
SURVEY OF TWO YEAR OLD CHILDREN,
SOUTH CAROLINA, 1974

Type	Dose 0		Dose 1		Dose 2		Dose 3—	
	No.	1974 %	No.	1974 %	No.	1974 %	No.	1974 %
DPT	50	7.4%	77	7.3%	67	7.7%	706	77.6%
Polio	53	7.4%	76	7.9%	80	9.3%	691	75.4%
Measles	255	24.7%	645	75.3%				
Rubella	264	25.6%	636	74.4%				

During the year epidemiological investigation was accomplished of 278 vaccine preventable diseases reported by physicians.

MATERNITY

Problem:

The lack of or inadequate maternity care results in:

- High maternal and infant mortality rates and an increase in the number of premature births.
- Problems relating to labor and delivery.

Objective:

To provide comprehensive maternity care (physical examinations, nursing services, nutrition counseling, social work service, preventive and therapeutic services, and assistance in planning for delivery services) to 6,339 maternity patients, 10% beginning in the first trimester, 75% beginning in the second trimester, and 15% beginning in the third trimester.

Narrative:

Table I indicates patients served, percent of need met and number of clinic visits by District, in FY 1973 and FY 1974.

TABLE I — MATERNITY PROGRAM

	Est. No. in Need	No. Served		Percent Need Met		No. of Clinic Visits	
		FY 73	FY 74	FY 73	FY 74	FY 73	FY 74
Appalachia I	840	336	323	40.0	38.4	1,173	1,061
Appalachia II*	1,650	73	254	4.4	15.3	331	1,650
Appalachia III	1,339	118	111	8.8	8.2	545	593
Upper Savannah . . .	867	535	481	61.7	55.4	2,133	1,784
Catawba	999	118	200	11.8	20.2	301	559
Midlands	2,153	1,493	1,477	69.3	68.6	6,120	6,120
Lower Savannah . . .	1,251	632	529	50.5	42.2	1,696	1,354
Wateree	1,010	497	362	49.2	35.8	2,463	1,956
Pee Dee	1,570	461	529	29.4	33.6	1,477	1,612
Waccamaw	863	371	407	43.0	47.1	1,002	1,372
Trident*	2,188	507	464	23.2	21.2	1,630	1,691
Low Country	669	142	161	21.2	24.0	383	426
State Total	15,399	5,283	5,298	34.3	34.4	19,254	20,178

(*Figures do not include patients served in Maternity and Infant Care Projects. Those figures are reported separately.)

In the Districts (Appalachia II, Catawba, Pee Dee, Waccamaw, and Low Country) showing an increase in patients served, more emphasis has been put on the maternity program, such as initiating prenatal clinics in counties where none existed, improvement in existing maternity services, and interest of District and private medical personnel. Increased employment opportunities which allow families to have medical insurance may have influenced the use of prenatal clinics.

TABLE II — TRIMESTER MATERNITY
CARE INITIATED NEW PATIENTS

	1st		Trimester 2nd		3rd		District Total	
		%		%		%		
Appalachia I	6	2.6	117	50.0	111	47.4		234
Appalachia II	30	16.4	106	57.9	47	25.7		183
Appalachia III	8	11.1	33	45.8	31	43.1		72
Upper Savannah	55	15.7	223	63.7	72	20.6		350
Catawba	24	14.5	92	55.4	50	30.1		166
Midlands	86	7.5	674	58.5	392	34.0		1,152
Lower Savannah	59	13.9	271	64.1	93	22.0		423
Waterlee	31	12.7	155	63.5	58	23.8		244
Pee Dee	60	14.2	241	57.1	121	28.7		422
Waccamaw	57	18.1	205	65.3	52	16.6		314
Trident	22	7.7	196	68.5	68	23.8		286
Low Country	<u>17</u>	<u>14.7</u>	<u>81</u>	<u>69.8</u>	<u>18</u>	<u>15.5</u>		<u>116</u>
State Total	455	11.5	2,394	60.4	1,113	28.1		3,962*

(*Not including 287 patients for whom trimester not stated.)

Table II (above) reflects the trimester in which maternity care was initiated. In districts where less than 10% initiated care in the first and third trimesters, problems such as insufficient clinic hours, insufficient clinician hours, and community attitudes and conditions influenced this service. One district (Low Country) has a low volume of patients and has a health service in the community which assists with hospital delivery, transportation and more complete maternity care, thus increasing community and patient awareness of need for early prenatal care.

TABLE III — TRIMESTER MATERNITY
CARE INITIATED NEW PATIENTS

Trimester Care Initiated	FY 73		FY 74	
	No.	%	No.	%
1st	318	8.5	455	11.5
2nd	2,299	61.3	2,394	60.4
3rd	<u>1,133</u>	<u>30.2</u>	<u>1,113</u>	<u>28.1</u>
Total	3,750	100	3,962	100
Not Stated	337		287	

Table III above indicates that the percentage of patients beginning prenatal care in the second trimester has remained relatively constant. There continues to be an excessive number of patients delaying prenatal care until the third trimester. Reasons for this have been addressed above.

Recruitment of social work and nutrition staff has been difficult. Consequently, these services have been available to a very small proportion of the clinic population.

Objective:

To provide delivery services for high risk patients and provide needed hospital care to selected neonates.

Narrative:

Financial resources were not available to implement delivery service for maternity patients and selected neonates.

TABLE IV—ANALYSIS OF NEW PATIENTS SERVED

Age	Age Distribution		FY 74	
	FY 73			
	No. Pts.	Cum. %	No. Pts.	Cum. %
< 15	125	3	117	3
15	193	8	198	8
16	329	17	325	16
17	399	28	439	27
18	456	40	477	39
19	395	50	412	50
20-24	1,147	81	1,251	81
25-29	418	92	466	93
30-34	180	97	186	98
35+	123	100	97	100
Total	<u>3,765</u>		<u>3,968</u>	
Not Stated	322		281	

Table IV gives the age distribution of new patients receiving Prenatal Clinic Care. Females younger than 16 and older than 35 are known to have more complications of pregnancy. The percentage of new prenatal patients in these age groups has remained relatively constant, but there has been an increase in the percentage of new patients in age group 20-24, the optimal ages for childbearing. Teenage patients constitute 50% of the patients for FY 73 and FY 74 compared to 48% for FY 72. Improved services for this population group, who have more medical and psychosocial problems relating to pregnancy, have been offered through special adolescent clinics as well as designing services in regular prenatal clinics in keeping with their needs on a statewide basis.

TABLE V—EDUCATIONAL STATUS

New patients—FY 73 and FY 74														
	Total No.	Grade % 1-5		Grade % 6-8		Grade % 9		Grade % 10		Grade % 11		Grade % 12		Over % 12
FY 73	3770*	106	3	793	21	569	15	649	17	594	16	982	26	77 2
FY 74	3985*	103	2	767	19	617	15	732	18	608	15	1069	27	89 2

(*This total does not include those patients for whom educational status was not reported. In FY 73 this number was 317 and in FY 74 this number was 264.)

Educational status (Table V) is another factor which influences the maternity course. When patients have low educational levels, they require more instruction regarding maternity care and planning for infants. Slightly over 50% of the new maternity patients for FY 73 and FY 74 had a tenth grade education or less. There are special public school classes for pregnant school girls located in Greenville, Jasper and Charleston Counties. Additionally, the State Department of Education this year has given leadership in encouraging school attendance for the pregnant and postpartum school girl.

MISCELLANEOUS MATERNITY INFORMATION:

TABLE VI—MATERNITY CYCLE DATA

	CY 1972		CY 1973	
	No.	Rate	No.	Rate
Maternal Deaths* ...	20	4.0	18	3.7
Infant Deaths**	1,126	22.5	1,105	22.6
Fetal Deaths**	791	15.8	809	16.5
Premature Births** ..	4,533	90.7	4,404	90.0
Neonatal Deaths** ...	774	15.5	751	15.4
Live Births	49,951	18.7	48,922	17.9

Table VI reflects a two year comparison of data relating to the maternity cycle. (*Rate is per 10,000 live births; **rate is per 1,000 live births.)

During FY 74, statewide efforts were made to improve maternity services. Foremost among these were the two maternity workshops, conducted by well qualified nurse-midwives for public health nurses, attended by 60 public health nurses from throughout the state. Additionally the Bureau of Maternal and Child Care joined other state agencies in sponsoring a statewide conference in November, 1973, on school-age pregnancy which was attended by over 500 participants. Continuing inter-agency work as a result of this conference is being done on county, district, and state levels.

During FY 74, maternity care became available for patients eligible for AFDC for the unborn child. This policy was made known to all health districts and counties with information about referral mechanisms. Assessment of the impact of this resource on the Department of Health and Environmental Control Maternity Program is premature at this time.

MEDICAL NUTRITION

Problem:

In the following groups, there are needy persons who must be identified and provided certain foods for health reasons: infants, pre-school children (13 months through 5 years), pregnant women, and postpartum and nursing mothers. Food and nutrition education programs for the women on this program must be provided to obtain the maximum benefits for all recipients.

Objective:

To increase the number of eligible women and children participating in the program.

Narrative:

This is a federal grant project limited to medical nutrition services in five counties: Allendale, Beaufort, Berkeley, Jasper and Sumter. It does not qualify as a statewide program because of the federal ruling that counties not already on the Medical Nutrition Program by a certain date and who were using food stamps were not eligible for the Medical Nutrition Program. The average number of persons served per month is as indicated:

Fiscal Year	Average Number Served Per Month
1970	2,227
1971	3,815
1972	3,949
1973	3,814
1974	3,704

The drop in average number served per month in the past two fiscal years is due partly to discontinuation of OEO transportation services for food recipients in the more remote areas, and a drop in the birth rate. The number of infants, children and women-provided supplemental foods during June of the last five years is as follows.

Month and Year	Infants 0-12 Months	Children 13 months Through 5 Years	Pregnant and Lactating Women
June, 1970	577	2,676	480
June, 1971	649	2,975	516
June, 1972	677	2,849	615
June, 1973	553	2,585	647
June, 1974	756	2,558	628

MIGRANT HEALTH

Problem:

Each year, principally in May, June, July and August, migrant workers and their families (totaling less than 6,000 persons) work the truck farms and orchards of the state. This group constitutes an essential part of the South Carolina work force. Because of the mobility associated with this work, special problems, unique to this part of the state's work force, exist in housing, safety, and health.

Although the Department of Labor has been legally delegated responsibility for migrant housing, responsibility for addressing the problems of migrant workers is not vested in a single agency.

Objective:

During the period May through August, to give general treatment clinic services to approximately 900 farm workers in Charleston, Edgefield and Beaufort Counties who require such care.

Narrative:

A total of approximately 900 patients for various medical problems were seen in 29 general treatment clinics. Approximately fifty referrals were made to medical specialists. An undetermined number of migrant farm workers were seen in routine public health daytime clinics (immunizations, well-child and prenatal).

PARASITES

Function:

To provide education about parasitic disease and how to prevent it. Support is provided to all personal health programs requesting the service, as well as to the public schools through the Department of Education, and to community organizations.

Significant Activities:

During FY 74, in cooperation with the Office of Communications, this supportive service developed and printed:

Meet Ro-Revus. An educational game/poster. 300,000 copies

The Whole Worm Catalog, A Layman's Guide to Intestinal Parasites, 50,000 copies

Audio visual materials acquired were:

One film, *Human Intestinal Nematode Infection*, was obtained from Roerig Pharmaceutical Company

Two Fairchild Model Seventy-07 cartridge-loading, super 8mm sound motion picture projectors

During FY 74 a survey was carried out in four counties to determine the incidence of intestinal parasites. An average of 71.4% of the children in all of the first grades of the public schools were screened in Marlboro, Dillon, Sumter and Clarendon Counties. In addition, two private schools were screened in Sumter County. Results of the survey are presented in the following table.

PARASITE PROJECT DATA

	Total Enrolled in 1st grade	# of Exam.	% of Exam.	# of Pos.*	% of Pos.	Treated
Dillon	643	506	78.7	67	13.2	67
Marlboro	634	392	61.8	54	13.8	50
Clarendon	462	323	69.9	44	13.6	44
Sumter	<u>1,661</u>	<u>1,207</u>	<u>72.7</u>	<u>129</u>	<u>10.7</u>	<u>126</u>
Total	3,400	2,428	71.4	294	12.10	287

(*The criteria for positive parasite infection is the presence of at least one or more of the following parasites: *Ascaris lumbricoides*, Hookworm, *Strongyloides stercoralis*, *Trichuris trichiura*, *Enterobius vermicularis*, *Entamoeba histolytica*.)

The results of the survey indicate that over 10.0% of the children in these rural counties have worms. The data for Sumter is lower and this is because of concentrated work by schools, The University of South Carolina, and other agencies to screen and treat. The other counties have never had a screening program.

Films and other educational materials describing the parasite infections and how to prevent them were given or shown to the children, parents and teachers.

A symposium on Human Nematode Parasites was held in Columbia for School Nurses and other interested persons. About 200 persons attended.

SCHOOL HEALTH

Problem:

The lack of adequate and appropriate health supervision may result in failure to identify physical, mental, social, and emotional handicaps which impair the normal growth and development of school-age children and prevent optimum benefit of school experience.

Objective:

To promote and assist in the formation of three county joint health and education committees.

Narrative:

Three county joint health and education committees were formed in York, Jasper and Orangeburg Counties making a total of five. Inter-agency councils are meeting in Georgetown, Lexington, Richland and Saluda counties.

Objective:

To promote at least two scheduled meetings per year between school nurses and the county public health nurses to share information on specific children (EPSDT, Title I, CHC and CC).

Narrative:

Ten counties have established such meetings.

Objective:

To encourage the public health nurses to offer to serve as a resource in health education to local school districts.

Narrative:

This objective was presented to and accepted by the MCC Program Nurse Specialists.

Objective:

To offer an orientation at the state level during 1973-74 school year to nurses newly employed in school health.

Narrative:

An orientation was provided in September 1973 to 24 newly employed school nurses.

Objective:

To offer in-service programs at the state level related to school health during FY 74.

Narrative:

School nurses were invited to all in-service programs offered by the Department of Health and Environmental Control.

Objective:

To maintain a record of some selected school activities performed by school nurses and/or public health nurses.

Narrative:

The recorded activities are indicated in the table below. In most cases projections of activities were met or exceeded.

SCHOOL HEALTH ACTIVITIES

	FY 73	FY 74
No. children screened, by type test:		
Vision	214,012	216,720
Auditory	112,523	155,345
Tuberculin	17,434	8,554
Other	21,881	34,967
No. children referred, by type test:		
Vision	14,059	13,042
Auditory	1,798	3,152
Other	10,047	13,805
No. children under care		
Vision	6,109	5,465
Auditory	782	1,154
No. of conferences with pupils	17,099	19,172
No. of conferences with teachers	13,569	11,926
No. of conferences with parents and others	11,046	9,569
No. in-service programs for teachers	1,366	1,362
No. in-service classes taught	2,327	2,048
No. visits to schools by PH nurses	—	829

(The above figures exclude data where the type test or service was unknown. For FY 1974 this amounted to 37,468 tests, 2,423 children referred and 853 under care.)

In an effort to assist each child to attain and maintain an optimum level of wellness, screening programs were utilized for early identification and treatment of health problems. By coordinating those screening activities being done in the schools with health services rendered through other agencies in the community, all resources should work together to assist the child toward better health. Through the screening activities and student conferences the school age child should gain knowledge and ultimately a better understanding of health principles as they apply to himself. By involving the parents and teachers in health

education through conferences and in-service programs this indirect method of teaching should reach the child through their day to day relationship.

SICKLE CELL

Function:

To provide education for the public about sickle cell anemia and other hemoglobinopathies and render counseling services upon request. Support is provided to community organizations and the general public requesting the services offered as well as to agency maternal and child care programs.

Significant Activities:

Education Programs presented in FY 74 were as follows:

Type of Program	No. Sessions	No. Attending	Total Hours
In-service training for Health Department Staff.....	11	284	47.5
Educational Programs for other agencies (DSS, MH, etc.)	12	405	29.0
Educational Programs for Schools, Civic, Church Groups	27	1,908	33.0
In-service training for Community Organizations	<u>8</u>	<u>91</u>	<u>23.0</u>
Totals	58	2,688	132.5

The staff participated in and co-sponsored a sickle cell symposium with the Columbia Area Sickle Cell Anemia Foundation (CASCAF). Approximately four hundred (400) health professionals attended. Sickle cell programs were presented to students and faculty at two educational institutions.

Staff members counseled 180 persons and made 5 home visits.

In FY 74, a total of 52,220 hemoglobin electrophoresis tests were performed in the DHEC Laboratory as compared to 38,807 tests in FY 73.

To determine the source of sickle cell testing in the state, a record was maintained in June 1974 which revealed that 26% of test requests came from the health departments, 11% from private physicians, and 63% from other entities.

STATE PARK HEALTH CENTER

Function:

To provide a hospital and respiratory disease center for treatment and rehabilitation of patients (from throughout the state) suffering from tuberculosis and chronic respiratory diseases.

Significant Activities:

As recommended by the Joint Commission on Accreditation of Hospitals, a hospital in-service education department was organized, staffed and began operation in providing improved and expanded staff education.

Significant changes between FY 1973 and FY 1974 are indicated below:

FY 1973	FY 1974
Opening of Multiphasic Clinic	Expansion and development of Multiphasic Clinic;
Irregular visits by dentist	Weekly visits by dentist to provide services to patients;
Departmental procedures manual incomplete or not up-to-date	All departments have prepared a written, current procedures manual for their section;
Probation status with joint Commission on accreditation of Hospitals	Accreditation by Joint Commission
	On Accreditation of Hospitals;
	Fire hydrant system repaired and expanded;
	Approved incinerator installed.

Health Center activities are reflected in Tables I and II.

TABLE I—PATIENT STATISTICS

	FY 73	FY 74
Average Daily Census	170.5	160.7
Patient Days	62,240	58,656
Average Hospital Stay (days)	102	104
Persons Hospitalized as of 1 July	173	155
Admissions	620	610
TB	410	375
Respiratory	93	81
Atypical disease	19	10
Other	98	144
Discharges	583	573
Deaths	47	55
Persons Treated	803	783

TABLE II—LAB & X-RAY ACTIVITIES

	FY 73	FY 74
Laboratory Examinations	69,224	78,668
X-ray/Multiphasic Films	258	1,357
X-ray/MCC	696	746
X-ray/TB patients	2,461	2,195
X-ray/employees	488	462

TUBERCULOSIS AND CHRONIC RESPIRATORY DISEASE CONTROL

Problem:

Tuberculosis continues to be a major public health problem. Of the new active cases identified yearly about 57.1% are advanced. Persons with advanced T.B. are most likely to spread organisms to others. Other chronic respiratory diseases are on the increase.

Objective:

To increase the percent of known active cases who are on drug treatment by 1% per year and to reduce the number of known active cases without recommended bacteriology.

TABLE I—TUBERCULOSIS DATA—STATEWIDE

	FY 73	FY 74
Number new active cases	608	636
New active case rate/100,000 population	23.5	23.3
Percent new active cases in advanced stage	62.8	57.1
Percent active cases with recommended bacteriology	88.0	96.0
Percent active cases registered hospitalized as of June 30	44.9	28.4
Percent of all active on treatment	95.8	95.9
Total on register (all stages) June 30	3,205	2,327
Tuberculosis deaths	72	63
Tuberculosis death rate	2.7	2.3

Similar data by district is indicated in Table II.

TABLE II—TUBERCULOSIS DATA—DISTRICT
NEWLY REPORTED ACTIVE CASES

			% Act. Adv.	% Rec.	% Hosp.	% On Treat.	Total Reg.
	No.	Rate*	State	Bact.			
Appalachia I	19	12.2	47.4	100.0	29.4	100.0	81
Appalachia II	67	20.6	46.3	83.9	21.5	86.3	168
Appalachia III	33	12.9	57.6	100.0	35.5	95.0	167
Catawba	28	16.7	50.0	100.0	30.8	100.0	106
Low Country	34	30.6	64.7	100.0	38.1	100.0	119
Lower Savannah I	18	14.9	44.4	100.0	37.5	100.0	82
Lower Savannah II	35	35.6	51.4	100.0	30.8	100.0	125
Midlands	77	19.3	59.7	100.0	34.8	100.0	283
Pee Dee	98	36.4	58.2	100.0	31.4	100.0	412
Trident	92	26.0	54.3	94.4	15.4	84.1	371
Upper Savannah	34	21.3	58.8	78.9	16.7	96.0	92
Waccamaw	57	38.2	68.4	100.0	34.1	100.0	182
Wateree	44	27.1	68.2	98.8	41.9	98.4	139
Total	636	23.3	57.1	96.0	28.4	95.9	2327

(*Rate/100,000 population)

The number of new active cases has fluctuated up and down from one year to the next over the past several years.

The 27% decline in total register was because of a change of policy in follow-up of inactive cases. Previously we have followed inactive cases for five years. The new policy is to follow them three years; therefore, all inactive cases that were inactive for four and five years were removed from the register.

Objective:

To expand testing and screening for tuberculosis (close follow-up of household and other close contacts to newly diagnosed active cases and tuberculin testing of selected groups with follow-up of reactors); specifically, to increase the percent of identified close contacts examined.

TABLE III—CONTACT DATA—DISTRICT

	No. Ident.	No. Exam.	% Exam.	% Household Contacts On Treatment
Appalachia I	223	203	91.0	37.1
Appalachia II	626	548	87.5	52.8
Appalachia III	212	210	99.1	53.9
Catawba	267	267	100.0	91.8
Low Country	196	182	92.9	78.6
Lower Savannah I	149	143	96.0	34.8
Lower Savannah II	322	283	87.9	76.0
Midlands	448	442	98.7	78.4
Pee Dee	641	641	100.0	93.8
Trident	386	385	99.7	33.6
Upper Savannah	303	284	93.7	46.4
Waccamaw	526	525	99.8	81.9
Wateree	354	354	100.0	77.0
Total	4653	4467	96.0	68.0

(Also see Table V)

There were fewer close contacts placed on prophylaxis in FY 74 compared to FY 73 (44% and 41% respectively). This is probably related to the continued controversy of liver disease associated with INH. The Communicable Disease Center, Tuberculosis Division, completed studies and had a national group to review the results and make recommendations. However, they have not officially released their recommendations to this date. Therefore, many physicians were reluctant to place individuals on preventative therapy.

TABLE IV—SUSPECT DATA BY DISTRICT

Districts	No. Ident.	No. with Adeq. Disp.	% with Adeq. Disp.	No. Diag. Act. TB	Yield New Act. Cases
Appalachia I	7	6	85.7	2	33.3
Appalachia II	41	41	100.0	12	29.3
Appalachia III	18	18	100.0	4	22.2
Catawba	23	23	100.0	1	4.3
Low Country	4	3	75.0	1	33.3
Lower Savannah I	7	7	100.0	1	14.3
Lower Savannah II	5	3	60.0	0	0.0
Midlands	32	32	100.0	14	44.0
Pee Dee	54	54	100.0	12	22.2
Trident	75	70	93.3	13	19.0
Upper Savannah	17	17	100.0	2	12.0
Waccamaw	21	21	100.0	5	23.8
Wateree	59	59	100.0	22	37.3
Total	363	354	97.5	89	25.1

Tuberculin skin testing activities decreased from 139,165 (non-contacts and contacts) tested in FY 73 to 122,609 (non-contacts and contacts) tested in FY 74. Of those tests given in FY 74 94,774 were read. Of those read, 5,773 were positive (over 10 mm.). This represents a 6.1% positive rate which is a decline from 7.0% for FY 73 among all persons tested and read.

TABLE V—NON-CONTACTS TESTED BY DISTRICT

	Total Non-Contact Tuberculin Tested & Read	Pos. PPD Non- Contact	% Reactors Non- Contact	Non- Contact Pos. Placed on Rx	% Non- Contact Pos. Placed on Rx.
Appalachia I	5,308	228	4.3%	171	75.0%
Appalachia II	9,330	354	3.8%	232	65.5%
Appalachia III	916	35	3.8%	10	28.6%
Catawba	6,410	229	3.6%	176	76.9%
Low Country	7,221	387	5.4%	364	94.1%
Lower Savannah I	1,256	131	10.4%	92	70.2%
Lower Savannah II	5,079	381	7.5%	254	66.7%
Midlands	15,374	1,063	6.9%	744	70.0%
Pee Dee	15,418	717	4.7%	560	78.1%
Trident	4,196	260	6.2%	37	14.2%
Upper Savannah	7,754	135	1.7%	80	59.3%
Waccamaw	7,183	490	6.8%	296	60.4%
Wateree	4,862	211	4.3%	141	66.8%
State Total	90,307	4,621	5.1%	3,157	68.3%

VENEREAL DISEASE CONTROL

Problem:

In FY 1973, 597 cases of infectious syphilis and 24,586 cases of gonorrhea were reported, ranking South Carolina among the top five states nationally.

Objective:

In FY 1974, among South Carolina's 2,600,000 people, to reduce by 144 cases the incidence of infectious syphilis among civilians.

Narrative:

To accomplish this objective, several methods were used. These included: (1) interviewing 100% of the infectious syphilis cases reported among civilians; (2) reinterviewing 97% of the infectious syphilis cases reported among civilians; (3) within 72 hours of an interview, examining

75% of all locatable new in-jurisdiction contacts to lesion syphilis; (4) prophylactically treating 95% of all contacts to lesion syphilis exposed to lesions within 90 days; and, (5) prophylactically treating 85% of all contacts to lesion syphilis exposed within 90 days.

The activities actually accomplished, in comparison with FY 73, are shown in the following table.

TABLE I—ACTIVITIES RELATED TO
SYPHILIS-CIVILIAN POPULATION

Activity	FY 73	FY 74
No. cases infectious syphilis reported	580	787
No. cases infectious syphilis interviewed	558	783
Per cent of cases interviewed	96%	99%
No. cases infectious syphilis reinterviewed	466	688
Per cent of cases reinterviewed	80%	87%
No. contacts examined	934	1,268
No. contacts examined within 72 hours	396	582
Per cent contacts examined within 72 hours	42%	46%
No. contacts exposed to lesions	319	433
No. prophylactically treated	288	407
Per cent prophylactically treated	90%	94%
No. contacts exposed within 90 days	731	992
No. contacts given treatment	624	897
Per cent given treatment	85%	90%

Infectious syphilis increases occurred in eight districts as noted by asterisk in the following table.

TABLE II—VENEREAL DISEASE BY DISTRICT

District	Infectious Syphilis		Total Syphilis		Total Gonorrhea		Total Syphilis And Gonorrhea	
	FY 73	FY 74	FY 73	FY 74	FY 73	FY 74	FY 73	FY 74
Appalachia I	2	2	8	8	1,395	1,313	1,403	1,321
Appalachia II*	26	30	80	81	3,209	3,419	3,289	3,500
Appalachia III	47	40	88	93	1,554	1,116	1,642	1,209
Catawba*	6	25	52	60	1,181	989	1,233	1,049
Central Midlands* ..	66	187	143	328	3,388	3,853	3,531	4,205
Low Country*	3	29	26	61	802	479	828	540
Lower Savannah I ...	9	9	42	33	423	552	465	587
Lower Savannah II ..	35	15	67	75	1,178	1,263	1,245	1,340
Pee Dee*	147	154	300	280	1,842	1,909	2,142	2,193
Trident	59	52	211	231	3,463	3,239	3,674	3,473

District	Infectious Syphilis		Total Syphilis		Total Gonorrhea		Total Syphilis And Gonorrhea	
	FY 73	FY 74	DY 73	FY 74	FY 73	FY 74	FY 73	FY 74
Upper Savannah* . . .	14	26	43	42	1,369	875	1,412	936
Waccamaw*	52	76	100	140	1,440	1,070	1,540	1,210
Wateree*	114	142	183	247	1,688	1,357	1,871	1,607
Not Stated					352	606	352	606
Military	17	40	35	77	1,302	1,346	1,337	1,423
Other VD							67	50
Totals	597	827	1,378	1,756	24,586	23,386	26,031	25,249

*Districts having increases in infectious syphilis in FY 74 over FY 73.

Objective:

In FY 1974, among South Carolina's 2,600,000 people, to reduce the incidence of gonorrhea by 3,375 cases.

Narrative:

As noted in Table II, gonorrhea cases were reduced. The methods used in pursuit of this objective were: (1) provision of assistance in the culturing of 120,000 females in the child-bearing ages of 15-44; (2) provision of assistance in culturing 85% of all females who received pelvic examinations in county health departments; (3) interviewing 50% of all males with gonorrhea reported from public clinics; (4) insuring treatment of 90% of all females with a positive culture; and, (5) promotion of screening activities in priority specialities of medicine.

Screening for the detection of asymptomatic gonorrhea in females was a highlight of our control program for FY 1974. Four part-time employees provided a courier service assisting gonorrhea screening in four major areas. A total of 133,515 female cultures was obtained. Of this number, 6,683; or 5%, were positive. Major sources of the cultures are indicated in Table III.

TABLE III—SOURCE OF GONORRHEA CULTURES
EXAMINED IN AGENCY LABORATORIES

Source of Culture	No. Cultures	No. Positive	Percent Positive
Private Physicians	33,386	801	2.4
Family Planning Clinics	55,231	2,589	4.7
Maternity Clinics	7,649	337	4.4
Disease Detection Clinics	868	9	1.0
VD Clinics	9,540	2,087	21.9
Military Establishments	12,670	209	1.6
All Other	14,171	651	4.6
Total	133,515	6,683	5.0

The following table indicates activities related to gonorrhea that were actually accomplished in FY 74, in comparison with FY 73. In general activities were confined to the public sector.

TABLE IV—ACTIVITIES RELATED TO GONORRHEA

Activity	FY 73	FY 74
No. cases reported—males	7,374	9,552
No. cases interviewed—males	3,024	3,755
Per cent cases interviewed—males	41%	39%
No. positive cultures among females	4,105	6,683
No. cases reported—females	3,476	6,434
Per cent females with positive cultures treated	85%	96%*

(*The 4% of the females not treated were those who could not be located.)

Health Education.

The following activities were conducted to promote health education, including venereal disease education.

Activity	FY 73	FY 74
Schools with meaningful health education programs	119	125
Number of teacher workshops held	10	13
Number of teachers trained	367	491
Number of school nurse classes	61	18
Number of public health nurses workshops	13	4
Number of public health nurses trained	412	78
Adult and community classes	309	300
Number of persons attending	4,635	—
Number of persons attending films		86,833
Number attending ETV Life Science (7th grade)		10,000

AIR QUALITY CONTROL

Problems:

a. Some sources of air pollution have not attained compliance with standards. Others must be kept under surveillance to assure maintenance of standards. New industrial sources may cause air pollution if uncontrolled. Nuisances such as open burning, odor, etc. require abatement.

b. Ambient air quality problem areas must be detected and defined.

Objectives:

The program's objective of controlling air pollution in FY 74 had four facets as follows:

- a. To insure that all known new sources comply with State standards during FY 74.
- b. To promote compliance with regulations and standards of open burning, visible emission, fugitive dust and nuisance regulations and standards among citizens, municipalities and industries.
- c. To maintain sulfur dioxide standards in the State's ten Air Quality Control Regions.
- d. To make a preliminary evaluation of the maintenance of particulate standards in the State's ten Air Quality Control Regions.

Narrative:

One hundred percent of the municipalities, and, based upon known instances versus potential violators, an estimated ninety-five percent of the over 600,000 other entities, complied with regulations and standards regarding open burning, visible emissions, and fugitive dust and nuisance.

In the state's ten Air Quality Control Regions, there was 100% compliance with sulfur dioxide standards.

Portions of the Greenville and Charleston Air Quality Control Regions were designated as Air Quality Maintenance Areas. A thorough evaluation of the areas will be made during FY 75 to determine the cause and solution to high ambient air particulate levels in these areas.

Permit applications were more than double the original projections, this in turn more than doubled the requirement for source inspections.

Activities accomplished in pursuit of the above objectives were:

Activity	FY 74	
	Projected	Accomplished
Individual lab analyses	17,500	15,850
Instrument calibrations	1,064	1,398
Emission inventories	500	297
Permits issued	400	877
Engineering source inspections	200	200
Source tests	100	140
Compliance investigations	500	471
Scheduled source inspections .	220	544
Enforcement actions	700	758
Air monitors operating		
High volume air samplers ..	68	68
Tape samplers	10	11
Continuous monitors	13	14

CERTIFICATION OF ENVIRONMENTAL SYSTEMS OPERATORS

Function:

To implement the Mandatory Certification Act (Act #1047) and the Rules and Regulations of the Board of Certification including:

- Certification of persons desiring to be operators and percolation technicians.
- Annual renewal of certification.
- Insuring that all practicing operators are certified.

Narrative:

A summary of the activities of this supportive service is as follows:

CERTIFICATION OF ENVIRONMENTAL SYSTEMS OPERATORS

Activity	FY 74
No. Initially Certified	(663)
Water	130
Wastewater	482
Percolation Technician	51
Total Certified Operators	(1,927)
Water	712
Wastewater	1,097
Percolation Technicians	118

Trainees and No Grade operators are encouraged to enroll in the correspondence course offered by the Water and Pollution Control Association of S. C. in cooperation with Clemson University or to take a 11-16 week night course at the respective technical education centers. Other operators are encouraged (not required) to enroll in some type of course to upgrade their status.

Should an owner fail to have a properly certified operator or should an operator operate without being certified, then Section 56-1544.16 gives the Board authority to take legal action.

DAIRY FOODS AND BOTTLED PRODUCTS

Problems:

More than 450 million pounds of milk were produced in the state of which approximately 39 million pounds were approved for shipment to out of state plants. Approximately 350 million pounds of raw milk for pasteurization were imported.

Pasteurized milk and milk products offered for sale in South Carolina, excluding that sold through government contracts, amounted to 494,559,654 pounds. When improperly handled or processed, milk, milk products, and frozen dairy foods can harbor disease producing organisms including streptococcus, staphylococcus, salmonella, Brucellosis, tuberculosis, hepatitis, virus, etc. The presence of pesticides and antibiotics can create a toxic condition in humans. The consuming public must be protected against adulterations of dairy products by water, pesticides, antibiotics, and improper handling.

Approximately 2 million soft drinks are bottled in the state yearly. Routine inspection is needed to assure a product that is safe for the consuming public.

Objective:

To insure that all dairies and pasteurization plants meet state standards of operation and maintenance at the Grade A level.

Narrative:

The scope of this activity is indicated below:

INSPECTION ACTIVITIES

	FY 73	FY 74
Dairy Farms		
No. of Dairy Farms	487	448
No. of routine inspections	1,936	1,935
Avg. no. inspections/farm	4.0	4.3
No. follow-up inspections	1,607	1,151
Avg. no. follow-up inspections	3.3	2.6
No. permits revoked (out of business)	56	53
No. permits suspended due to test results of milk	58	90

	FY 73	FY 74
Pasteurization Plants		
No. of plants	22	22
No. of routine inspections	184	228
Avg. no. inspections/plant	8.4	10
No. follow-up inspections	224	258
Avg. no. follow-up inspections/plant	11.1	11.7
No. permits suspended due to test results of milk	19	28

During the year, it was necessary to dispose of 158,460 pounds of raw milk due to permit suspension. This was due primarily to the product having high standard plate counts, antibiotics, and added water in the milk. Dairymen were allowed to sell 22,000 pounds of raw milk for ungraded sale while off market for penalty of permit suspension.

SAMPLING ACTIVITIES

	FY 73	FY 74
Raw Milk		
Number samples analyzed	7,031	7,222
Number tests performed	27,904	36,110
Per cent tests unsatisfactory	3.3%	2.7%
Pasteurized Milk		
Number samples analyzed	2,417	3,150
Number tests performed	19,336	25,200
Per cent tests unsatisfactory	4.8%	4.3%

Samples collected increased this year. This is partially due to the increase in out of state producers shipping into South Carolina. It also indicates the effort of program personnel to do a thorough job of sample collection.

Objective:

To maintain surveillance of frozen dairy food products so that adulterated or improperly labeled dairy products are removed from the market.

Narrative:

Inspections and sampling, as enumerated below, are the activities required to meet this objective.

FROZEN FOOD PLANTS ACTIVITIES

	FY 73	FY 74
No. plants permitted	7	7
No. routine inspections	49	50
Avg. no. inspections/plant	7	7.1
Avg. no. follow-up inspections/plant	1	1.5
No. frozen dairy food samples collected	916	1,234
No. of analyses performed	4,580	4,936
Per cent of analyses unsatisfactory	7.9	7.1

No permits were suspended or revoked nor was any frozen food product removed from the retail markets.

The frozen dairy food program continues with little change. There was a 35% increase in samples collected. This was partially brought about by having adequate laboratory personnel to perform needed tests. Special effort was made to reduce the frequency of samples with bad results from plants in South Carolina.

Objective:

To insure that soft drink plants are inspected.

Narrative:

As indicated below, the number of bottling plants continued to decline.

BOTTLING PLANT ACTIVITIES

	FY 73	FY 74
No. of bottling plants permitted	43	38
No. of routine inspections	98	71
Avg. no. inspections/plant/yr.	2.3	1.9

EMERGENCY HEALTH SERVICES

Problem:

Timely and properly administered primary medical aid is not always available to individuals, both transients and natives in South Carolina who are injured or critically ill as a result of such situations as traffic mishaps, home, farm, recreational and seasonal accidents; sudden critical illnesses; and, disasters.

Objective:

To reduce death and injury resulting from accidents and other emergencies by upgrading emergency medical services systems to attain minimum federal and state standards by 1976.

Narrative:

During FY 1974 a state law was passed which provides for establishment of standards for the improvement of emergency medical services relating to the licensing of ambulance attendants and services providing for an Emergency Medical Services Advisory Council. The law also provides for regulation of design of ambulances (vehicles), emergency medical equipment and communications equipment. In FY 74 nine county EMS Systems were upgraded, compared to seven in FY 73. The EMS Systems in 31 of the 46 counties have now been upgraded to conform to the State Plan.

Objective:

Provide Emergency Medical Technician training for ambulance attendants and others.

Narrative:

The number of ambulance attendants completing emergency medical technician (EMT) training during FY 73 was 556; 822 ambulance attendants completed (EMT) training during FY 74. The increase in EMT training resulted from an increased number of instructors teaching more courses in more technical education centers and other locations.

Objective:

To reduce death, injury, illness, and suffering resulting from disasters through proper preventive and planning measures.

Narrative:

During 1973 a state law was passed providing the Governor powers to declare disaster situations locally or statewide. Implementation of this law requires effective planning at county and state levels to provide medical care for local citizens and refugees. Action across state lines will be on a reciprocal basis. Compilation of a new state disaster plan is now in process and, upon publication, all existing county and district plans will require updating. Implementation of these plans, when completed, will set forth both preventive and operational capabilities to minimize hardship, illness, injury or death. The total number of county plans now prepared is 23.

Objective:

Promote training of citizens in Medical Self-Help.

Narrative:

A training course for individuals to care for themselves and others during disasters is a vital facet of medical preparedness. Medical self-help training was provided to 16,813 South Carolina citizens in FY 74.

This number was less than the 26,000 projected to be trained due to inability of school personnel to offer as many courses as planned in this subject during the report period.

Objective:

Maintenance of emergency medical supplies in packaged disaster hospitals (PDH) for use in disasters involving mass casualties.

Narrative:

South Carolina now owns a total of 35 PDH's, stored in strategic locations. These units require inventory periodically as well as general caretaking. Total number inventoried and inspected in FY 1974 was 6.

FOOD PROTECTION

Problem:

South Carolina's population has become increasingly mobile—resulting in one of every four persons, on the average, eating out each day. The present, as well as the number of new and varied types of food serving and selling operations, present a multitude of potential food-borne disease outbreaks relating to handling, transportation, and storage of food. Additionally, the public has come to demand higher levels of sanitary food production and quality.

Objective:

To reduce the demerit score for permanent food service establishments by 10% in each county.

Narrative:

The demerit score for food service establishments was not determined this year due to a shortage of survey personnel. Activities indicating efforts towards improvement in this area follow:

ACTIVITIES RELATED TO PERMANENT FOOD SERVICE ESTABLISHMENTS

Type Activity	FY 73	FY 74
No. establishments permitted	5,950	6,122*
No. routine inspections	21,774	23,077
Avg. no. inspections/establishment	3.7	3.8
Avg. demerit score	31.31	N.A.
No. plants reviewed	513	448
No. training sessions conducted	74	103
No. employees trained	2,627	2,974

(*Excludes establishments in cities of Columbia and Florence which are not permitted by this agency.)

Objective:

To insure that new and remodeled retail markets, mandated by law, meet minimum construction standards and receive inspections for compliance with regulations governing maintenance and operation.

Narrative:

Activities directed towards the objective are presented below.

RETAIL MARKET ACTIVITIES

Type Activity	FY 73	FY 74
No. markets permitted	3,221	3,252
No. routine inspections	7,895	9,787
Avg. no. inspections/market	2.5	3.0
No. plans reviewed	90	105
No. employees trained	NA	319
Demerit score	NA	38.75

Objective:

To insure that all known temporary food service establishments meet state regulations and are permitted prior to serving food.

Narrative:

Activities directed towards accomplishment of this objective are presented below.

ACTIVITIES RELATED TO TEMPORARY FOOD
SERVICE ESTABLISHMENTS

Type Activity	FY 73	FY 74
No. applications received	455 (est)	488
No. permits issued	380	369
No. permits denied	75 (est)	19
No. routine inspections	955 (est)	2,180

Objective:

To initiate survey of food vending locations to insure compliance with regulations.

Narrative:

During the year 826 industrial plants were surveyed.

GENERAL SANITATION

Problems:

Health is affected by insanitary conditions associated with individual wastewater disposal systems (e.g. septic tanks), individual non-

community water supplies, camps and parks, ice plants, public accommodations, mobile home parks, day care facilities, and nuisances at private and public premises. Additionally, the threat of rabies is a potential health problem.

Objective:

To provide inspections of public and private facilities or premises in accordance with rules and regulations.

Narrative:

The subprograms requiring routine inspections, and the activities associated therewith are shown in Table I.

TABLE I—SUBPROGRAMS REQUIRING
ROUTINE INSPECTIONS

Subprograms	No. of Facilities Reported (Survey)	No. Inspections*		Avg. Inspection Per Facility FY 74
		FY 73	FY 74	
Camps	197	353	307	1.56
Hotel & Motel	1,352	3,292	2,235	1.65
Mobile Home Parks	2,628	6,865	5,638	2.15
Schools	1,193	2,311	1,704	1.43
Ice Plants**	51	Unk.	Unk.	—
Jails & Penal Inst.**	101	Unk.	Unk.	—
Day Care/Foster Homes	Unk.	Unk.	949	—
Total	5,421	12,821	10,833	

(*The number of activities reported represents routine, complaint, follow-up and site inspections.)

(**Statistics are not available—reporting systems are being developed.)

Experience has demonstrated that a direct correlation exists between facility sanitation and frequency of field visits. Therefore, frequency inspection standards are being established whereby additional services will be offered and environmental sanitation ultimately improved. The reduction in the number of inspections is a reflection of the emphasis placed on more precise reporting, as well as on quality rather than quantity of inspections.

Ice plants, jails and penal institution programs were initiated. A reporting mechanism is being devised.

TABLE II—SUBPROGRAMS NOT REQUIRING
ROUTINE INSPECTIONS

Non-routine Premise Inspections	FY 73*	FY 74*
Subdivisions	3,111	1,244
Industrial Parks	484	341
Institutions	320	207
Private Premises	39,424	25,061
Public Premises	6,467	2,674
Public Restrooms	1,485	1,266
Day Care/Foster Homes	Unk.	949
Solid Waste**	<u>2,475</u>	<u>1,199</u>
Total	53,766	32,941

(*The number of activities reported represents routine, complaint, follow-up and site inspections.)

(**Some counties perform routine inspections and others perform only referral and/or complaint investigations.)

To improve the acceptance and implementation of improved sanitation guidelines 32,941 inspections were made in non-routine inspection programs. This represents 205.8 inspections per each 160 field personnel involved in General Sanitation programs.

The inflationary economic condition, fewer industrial park developments, and other factors influenced the demand for facility inspections.

A concerted effort was made to validate inspection reports during the fiscal year. Therefore, many of the variations recorded above can be explained by this endeavor. One county, with one sanitarian, reported from July, 1972 to February, 1974, 136 school inspections with approximately 16 existing school facilities before corrective action was initiated.

Objective:

To insure that materials and installations of private sewage disposal systems meet minimum sanitation standards and to inspect individual water supplies where requested.

Narrative:

Activities for private water and sewage systems are indicated in Table III and Table IV.

TABLE III—PRIVATE WATER SUPPLIES

	FY 73	FY 74
Inspections	11,223	9,485
New Installations	Unk.	3,385
Samples Collected	Unk.	8,405

TABLE IV—PRIVATE SEWAGE SYSTEMS

	FY 73	FY 74
Inspections	68,667	58,115
New Installations	Unk.	18,637

Two important factors influenced the reduction of private water and sewage system inspections—a reduction in rural and urban housing starts, and implementation of a more stringent surveillance of reporting from field personnel by program directors and supervisors.

A quality control program was initiated by which all manufacturers producing cast-in-place septic tanks were required to submit exhibits to verify that their products met acceptable sanitation engineering standards. Thirty-nine pre-cast concrete and four fiberglass manufacturers have been approved.

Objective:

To protect the public from the possibilities of rabies outbreaks.

Narrative:

On June 18, 1973, Act #433 in the "Acts and Joint Resolutions of 1972" increased the maximum inoculation fees from \$2 to \$3. This increased cost coupled with the non-existence of rabies reported in domestic animals and humans in recent years has decreased public interest and thus the amount of activities reported.

TABLE V—RABIES ACTIVITIES

	FY 73	FY 74
Clinics Promoted	918	945
Clinics Held	840	765
Dogs Immunized	94,983	75,517
Rabies Investigations	17,926	14,137
Animals Quarantined	4,202	3,863
Heads Submitted	635	560

NOISE CONTROL

Problem:

Studies show that excessive noise is a hazard to the public's health and welfare. It is estimated that about two out of every three South Carolinians are exposed to an acoustical environment that may lead to physiological and/or psychological stress. Current estimates are that up to five percent of school age children and twenty percent of teenagers with an existing hearing handicap may experience noise induced hearing loss later in life due to excessive acoustical pollution. Municipal and county noise ordinances are seldom enforced in South Carolina. Most noise ordinances are unenforceable because the standards are subjective rather than quantitative.

Objective:

To develop a comprehensive state-wide environmental noise abatement plan that will establish the basis and framework for future direction and implementation.

Narrative:

Essential to the development of a comprehensive state-wide environmental noise abatement plan is the enactment of the department's proposed noise control legislation into law. This proposed legislation was submitted to the legislature during FY 74 but was not acted upon. State ambient noise standards are being drafted and will be adopted and implemented when authorized by the General Assembly.

Objective:

To respond to all requests received for advice and assistance concerning the problems of noise pollution.

Narrative:

The Department's noise control consultative activities are designed to protect the public from noise induced hazards to physiological, psychological, and biological stress. Consultation is available upon request. Specific services include monitoring noise sources, assisting with inspections and investigations, reviewing and commenting on environmental impact statements, and providing technical assistance pursuant to the development of noise standards and regulations. The scope of the noise program is severely limited because of a shortage of personnel.

OCCUPATIONAL HEALTH

Problem:

Approximately 1.1 million people of the 2.6 million population of South Carolina are in the work force. Of these, 900 thousand wage and salary workers are employed in about 40 thousand establishments affected by state and federal occupational health laws. Occupational health hazards assume many forms; however, most may be classified as chemical, biological, physical or psychological and most are chronic rather than acute in nature. Major facets of the overall occupational health problem have been the widespread lack of awareness that occupational illnesses are preventable and the readiness to tolerate occupational health problems instead of providing assessment and seeking solutions.

Objective:

To assess occupational safety and health hazards in accordance with state occupational safety and health standards.

Narrative:

Activities undertaken in order to determine compliance with standards were as follows:

COMPLIANCE ACTIVITIES

Type Activity	FY 73	FY 74
Compliance Investigations (plants).....	18	223
Workers employed in plants.....	3,847	42,414
Plants in violation.....	14	148
No. of violations.....	51	598
No. of workers exposed in plants		
in violation.....	607	11,405
Field determinations.....	366	3,214
Samples collected.....	5	270

The increase in compliance inspections is a reflection of a change in emphasis on the part of the federal government.

Objective:

To provide assistance and advice to both the public and private sector regarding the technical and medical aspects of occupational health.

Narrative:

Visits for consultation on the technical and medical aspects of occupational health may be self-initiated, made on request, or made in response to a complaint.

CONSULTATION ACTIVITIES

	FY 73	FY 74
No. of visits	108	45
Medical and Nursing	25	7
Technical	83	38
No. of recommendations	91	19
No. workers employed in plants	14,314	15,108
No. of field determinations	308	236
No. of samples collected	22	52

The medical and nursing visits were low because of staffing problems, orientation training of new personnel, and emphasis on compliance investigations.

Of the technical visits made, 29 were on request, 7 in response to complaints, and 2 were self-initiated.

RADIOLOGICAL HEALTH

Problem:

Exposure to radioactive substances—radium, radioisotopes, radioactive fallout, releases of radioactivity to the environment from nuclear facilities and x-rays—can adversely affect health and the environment. If improperly used, microwaves and radar can cause tissue damage.

Objective:

To conduct an environmental surveillance program for nuclear facilities which will: a. verify the continuing adequacy of source control; b. provide necessary data for adequate estimates of the radiation exposure of members of the public; c. provide adequate data for public information purposes; d. establish pre-operational levels; e. maintain surveillance of operating plants; f. assess cumulative adverse effects of all nuclear power plants on South Carolina's environment; and, g. provide emergency surveillance capabilities in case of nuclear accident.

Narrative:

In order to accomplish the above, surveillance activities were as follows:

SURVEILLANCE ACTIVITIES

	FY 73	FY 74
Environmental samples collected	1,974	2,904
Radiological analyses performed	7,230	7,621
Special analyses performed	—	366

The surveillance activities outlined above are providing sufficient information to verify that radioactivity released to the environment and the consequent radiation exposure of members of the public are as low as practicable. Currently there are six major nuclear facilities operating and six additional facilities being constructed in S. C.

Objective:

To license the possession and use of all types of radioactive materials.

Narrative:

Activities conducted to accomplish this objective are as follows:

MATERIALS LICENSING ACTIVITIES

	FY 73	FY 74
No. of materials licensees		
at year end	122	127
No. of materials licenses		
at year end	173	187
No. of amendments issued to licenses	138	162
No. of licensee inspections	48	47
No. of follow-up inspections of		
licensees	5	2
No. of pre-licensing inspections of		
potential licensees	6	3
No. of licensees in compliance	21	20
No. of non-compliance items	35	58

The increase in non-compliance items is a result of increased activity at the waste burial ground and the opening of a second nuclear laundry.

Objective:

To register all radiation producing machines, such as x-ray.

Narrative:

By registering all radiation producing machines a means is provided to more effectively control the use of x-ray producing sources and devices, particularly in the field of medical diagnosis and therapy.

Shielding of x-ray facilities within hospitals, doctors' offices, clinics, institutions and industry are checked against standards established in the department's x-ray regulations and by the National Council on Radiation Protection and Measurements (NCRP). Inspection of registrants are conducted on a recurring basis.

X-RAY REGISTRATION ACTIVITIES

	FY 73	FY 74
No. of facilities w/units registered		
as of year end	1,303	1,151
No. facilities inspected	55	126
No. x-ray units registered as of		
year end	2,066	2,197
No. units inspected	119	222

Objective:

To actively participate with the U. S. Atomic Energy Commission in the regulation of all nuclear facilities operating or under construction in S. C.

Narrative:

The staff participated in two public hearings for nuclear facility construction permits. Comments were filed with respect to seven different environmental impact statements, Safety Analysis reports, and license applications.

Objective:

To execute emergency actions in response to certain types of accidents and incidents involving radiation sources or exposure to individuals from such sources, and to report results thereof to the Governor's office and to the federal government.

Narrative:

The staff was involved in the investigation of two transportation incidents, two incidents at nuclear power reactors and one incident at the Savannah River Plant.

Objective:

To educate the general public and the occupationally exposed worker concerning radiological health problems.

Narrative:

Twenty-six formal training courses, lectures, seminars and workshops, totaling approximately 100 hours, were held. These were attended by 644 people. Informational bulletins (13), were distributed to 13,300 persons.

Objective:

To inspect sources of non-ionizing radiation, such as microwave ovens, radar, lasers, photo-therapy, and diathermy machines.

Narrative:

Twenty-two sources of non-ionizing radiation were inspected.

RECREATIONAL WATERS

Problem:

Public swimming pools and supervised natural swimming areas serve an estimated 80,000 persons daily in season. Improper operation and maintenance of swimming facilities, as well as improper design and construction of swimming pools, can cause the transmission of diseases and infections.

Objective:

To insure that an anticipated 150 new public swimming facilities in South Carolina will meet design and construction standards; to insure that public swimming facilities are bacteriologically and chemically safe.

Narrative:

Central office personnel reviewed more than the projected number of plans and specifications to insure proper design of new and modified facilities. District personnel also exceeded the projected number of inspections for newly constructed and modified facilities. Activities were as follows:

Activity	FY 73	FY 74
No. Plans Reviewed	214	285
No. New Facilities Constructed	129	190
No. Facilities Delayed in Opening (construction deficiency)	56	41
No. Construction Inspections	179	440
No. Facilities Inspected	1,146	1,342
No. Inspections	9,303	10,882
No. Bacteriological Samples Analyzed	8,225	12,847
Percent Bacteriological Samples Unsatisfactory	10.0	11.0
No. Chemical Tests Made	18,605	21,764
Percent Chemical Tests Unsatisfactory	27.5	27.3
No. Temporary Closures of Facilities	473	711

SHELLFISH SANITATION

Problem:

Because shellfish are frequently eaten raw or partially cooked, if harvested from contaminated water or improperly processed, they can transmit such waterborne diseases as hepatitis, typhoid, paratyphoid and dysentery.

Objective:

To prevent the harvesting for human consumption of any shellfish from contaminated waters.

Narrative:

Personnel conducting daily patrols apprehended 13 individuals in contaminated waters. Five persons, all second offenders, were taken to court and fined. Other activities were as follows:

Activity	FY 73	FY 74
No. Patrols Per Week	34	36.5
No. Acres Patrolled Per Man	15,333	16,333
No. Water Samples Collected	786	1,485
No. Unsatisfactory Samples	—	445

Objective:

To maintain at the present, or a lower level, the number of acres of shellfish bearing waters closed to harvesting of shellfish for human consumption.

Narrative:

An additional 4,500 acres of shellfish bearing waters were closed during the fiscal year because of malfunctions in wastewater treatment plants, but are expected to be reopened this fall due to the installation of a new, non-discharge type wastewater treatment system. Activities for this phase were as follows:

Activity	FY 73	FY 74
No. Acres Shellfish Waters	275,248	275,248
No. Acres Closed	76,664	81,164
No. Premises Surveyed	3,575	3,040

Objective:

To insure that the processing of all shellfish for human consumption is in accordance with standards.

Narrative:

Several plants were closed temporarily because of improper operation and because high percentage of the meat samples collected from these plants was bacteriologically unsatisfactory. The following activities were accomplished:

Activity	FY 73	FY 74
No. Processing Plants	39	39
No. Plant Inspections	183	242
No. Inspections Unsatisfactory	—	18
Total Meat Samples Analyzed	106	100
No. Plant Meat Samples Analyzed	—	34
No. Plant Meat Samples Unsatisfactory	—	10
No. Plants Temporarily Closed	—	3

SOLID WASTE MANAGEMENT

Problem:

The amount of solid waste generated increases proportionately with economic and population growth. The public is poorly informed about acceptable methods of refuse collection and disposal. Promiscuous dumps and roadside litter still abound throughout the State. Rodent and other vector problems create economic losses and present health problems through vector borne diseases. Programs to insure disposal of industrial waste have not been coordinated. Resource recovery projects have not been effective.

Objective:

To close promiscuous and open dumps in South Carolina and insure that all solid waste management regulations are enforced.

Narrative:

Activities in these areas were as follows:

Activities	FY 73	FY 74
Number Dumps Closed	115	72
Number Inspections of Domestic Disposal Facilities	513	1,058
Number Inspections of Industrial Disposal Facilities	—	250

Objective:

To increase the number of man-hours devoted to public information programs and training sessions throughout the state.

Activities	FY 73	FY 74
Number Man-Hours Spent on Public Information Sessions	—	210
Number Man-Hours Spent on Training	144	774

Objective:

To assist in vector control activities related to solid waste management.

Narrative:

During the year 85 different vector control activities were undertaken in relation to dump closures and other refuse collection and disposal problems. Training in vector control activities was conducted for 17 personnel.

Objective:

To insure that industries not now using community landfills or other acceptable facilities either begin using approved sanitary landfills or their own permitted industrial landfills.

Narrative:

A total of 594 industries were inspected with regards to waste disposal facilities. Approximately 95% of those could use regular landfills, and the other 5% had special problems of handling and treatment of solid wastes.

WASTEWATER AND STREAM QUALITY CONTROL

Problem:

Water quality is not uniform throughout the state because of:

- a. Inadequate treatment of wastes in many industrial, municipal, and privately owned domestic waste systems as a result of inadequate design and/or inferior construction and materials; poor location with respect to dilution in the receiving stream; and, poor operation and maintenance, including a lack of properly qualified operating personnel.
- b. An ever-increasing volume of waste is being discharged into the waters of the state from new waste treatment systems.
- c. Unauthorized discharges of untreated wastes, both domestic and industrial.
- d. Accidental discharges of industrial plant chemicals and wastes, as well as spills of petroleum products and chemicals.

Objective:

During FY 74 to maintain at the present, or a higher level, the percent of the 1,900 existing waste treatment systems in South Carolina which are operated and maintained in accordance with state and federal standards.

Wastewater treatment plants were surveyed for permit compliance. Survey results were as follows:

SURVEY ACTIVITY*

Total Systems	1,900
Total Systems Surveyed	1,900
No. Surveys Made	2,311
No. Systems Complying	1,809
No. Systems Non-complying	91

Administrative orders were issued on 23 of the 91 permit violations. Five of these orders were rescinded due to satisfaction of compliance commitments.

Objective:

To insure that all new systems to be installed in South Carolina, as well as improvements to upgrade existing systems in accordance with compliance schedules to be applied, meet design and construction standards.

Narrative:

Construction permits issued during FY 74 by category are as follows:

Activity	No. Permits Issued FY 74	No. Permits Projected FY 74
Industrial	80	70
Agricultural	39	25
Municipal	78	60
Community	<u>299</u>	<u>275</u>
Total	496	430

A total of 256 engineering reports and 909 sets of plans and specifications were reviewed.

Inspections by district engineers during the year were as follows:

	Municipal	Community	Industrial	Agricultural	Total
Site Inspections	37	391	68	7	503
During Construction Inspections	53	569	76	2	700
Final Construction Inspections	34	302	44	1	381

A total of 226 National Pollution Discharge Elimination Systems (NPDES) Effluent Quality Limited and Water Quality Limited permits were certified. Of these, 43 were municipal, 177 industrial, and six privately owned. No agriculture NPDES permits were issued.

Objective:

To eliminate all reported unauthorized discharges of untreated wastes (domestic and industrial) during FY 74.

Narrative:

There were four orders issued against unauthorized dischargers of untreated waste; three of these were eliminated, the remaining one is scheduled to be eliminated during FY 75.

During the year 94 spills and discharges of oils, petro-chemicals, and inorganic chemicals were reported. Of these 93 were investigated by the

agency and appropriate action taken. The other was investigated and handled by the U. S. Coast Guard Service. Approximately 40 of the 94 were confined to the area of the spill without contamination of navigable waters; 15 were not contained and eventually reached navigable water but lost their identity and did not lend themselves to clean up efforts. There were 35 spills which did reach a navigable stream and were cleaned up by agency personnel.

Objective:

During FY 74 to submit to the Environmental Protection Agency basin plans and wasteload allocations for the Santee-Cooper River Basin.

Narrative:

Complete analyses were performed for all Santee-Cooper River Basin segments and waste load allocations for all significant discharges were completed.

WATER SUPPLY

Problem:

An estimated 2.3 million South Carolinians plus many tourists drink water daily from more than 2,600 water supply systems. New systems are constantly being built. Diseases which are transmitted through water include dysentery, hepatitis, typhoid, paratyphoid, leptospirosis, etc. Many chemicals are toxic and many aesthetically or economically undesirable.

Objective:

To insure that new or modified public and semi-public water supply systems meet acceptable standards of design.

Narrative:

Of the plans submitted for major changes or new systems 75% were insufficient as submitted and additional reviews had to be made. Permits as such were not issued this year for certain classes of smaller semi-public systems due to personnel shortage.

Activity	FY 73	FY 74
Plans Submitted	605	734
Number of Reviews	952	1,130
Number of Permits Issued	520	457

Objective:

To insure that new or modified public and semi-public systems constructed meet acceptable construction standards.

Activity	FY 73	FY 74
Preliminary Site Inspections	356	282
During Construction Inspections	704	493
Final Construction Inspections	—	234

Objective:

To insure that public and semi-public systems in operation meet all standards of operation and maintenance and provide potable and palatable water in sufficient quantity.

Activity	FY 73	FY 74
Systems Surveyed	1,522	989
Operational and Maintenance Inspections	1,522	973
Bacteriological Samples	29,184	30,775
Chemical Samples	1,831	1,787
Laboratories Certified	91	92
Cross-Connection Promotions	167	195
Cross-Connection Inspections	7,218	4,547*
Emergency Situations Handled	11	7
On-the-job Operator Training		43
Operational Problems Assisted With		16

(*This number is not comparable to FY 73 numbers due to a different method of reporting by utility programs.)

Objective:

To monitor systems adding flouride.

Activity	FY 73	FY 74
Number of Supplies Adding Flouride	46	50
Number of Fluoride Samples	777	810

VECTOR CONTROL

Problem:

Local Vector Control Programs, being restricted in size and scope, are unable to have or to get the specialized services and resources needed to function at optimal levels. Specific problems peculiar to each vector exist in the areas of mosquito control, rodent control, tick-borne Rocky Mountain Spotted Fever, and flies.

Objective:

Provide specific vector information services for local vector control programs and citizens of South Carolina and to develop and distribute vector educational materials and information.

Narrative:

An estimated 870 requests for specific vector information were handled including insect and animal identifications. Eleven slide-tape shows, 112,000 handouts, 2,593 posters, 1,347 question and answer sheets as well as a program on radio and T. V. concerning Rocky Mountain Spotted Fever (RMSF) were done. Training sessions were conducted on different vectors and their control. A method to review local vector control programs has been developed and used. This technique is a Vector Program Analysis (VPA) which can be specifically tailored to fit local mosquito control or rodent control programs.

Objective:

Enable all approved local vector control programs to obtain insecticides and rodenticides.

Narrative:

Malathion for mosquito control and rodenticides for local rat control programs were made available as follows:

	FY 73	FY 74
Malathion	23,171 gal.	26,722 gal.
Rodenticide	13,296 lbs.	17,399 lbs.

Objective:

To promote mosquito control.

Narrative:

Professional entomological assistance was provided to local mosquito control programs. A suitable mosquito borne disease emergency action plan was developed. A series of eight meetings were held to promote cooperation between federal, state and local agencies in seeking ways to deal with the problem of mosquito production on spoil areas.

Other activities included:

Vector Control Workers Assigned During Summer	22
Spoil Area Dredging Permits Reviewed	117
Impoundment Inspections	11
Mosquito Program Analysis Prepared	1

Agency personnel participated in the formation of the South Carolina Mosquito Control Association whose purpose is to further the understanding and practice of mosquito control.

Objective:

To provide technical assistance to operating rodent control programs and encourage the development of new programs.

Narrative:

Professional rodent control assistance has been provided to local rodent control programs. Organized rodent control programs were reviewed periodically. Rodent control services have been rendered to various state institutions.

Other rodent control activities were:

New Rodent Programs Started	6
Persons Receiving Rodent Control Training	67
Premises Inspected	46
Rodent Projects Inspected	8
Rodent Program Analysis	1

Objective:

To combat Rocky Mountain Spotted Fever (RMSF) and ticks.

Narrative:

This objective was accomplished by informing the public of the threat of R.M.S.F. and possible preventive measures. Laboratory services were provided to determine those ticks which were infected with R.M.S.F. organisms. Only ticks that had bitten people were tested. From January 1 to June 30, 1974, 900 were received for testing. During that period, there were 27 cases and three deaths from R.M.S.F. as compared to 32 cases and 3 deaths reported in 1973.

Objective:

To provide entomological consultative assistance to local health officials on fly problems.

Narrative:

Twenty-seven service requests involving flies were handled. Two training sessions involving 36 people were conducted.

Water Pollution Control Orders Issued by
The Department of Health and Environmental Control (FY 74)

Order # 73-34-W

Date: September 5, 1973

Respondent: Roberts' Carwash, Highway #49, York County

Conclusion of Law: Roberts' Carwash was found to be in violation of Section 63-195.14 of the S. C. Code, 1962, which requires that a permit be obtained before a waste treatment facility may be constructed.

Action: Roberts' Carwash was ordered to (1) submit an application by November 5, 1973 for an appropriate permit; (2) submit any required

plans for modification to the facility by Jan. 5, 1974; (3) begin any necessary construction by March 5, 1974; and (4) complete construction of an adequate waste treatment facility by July 5, 1974.

Order # 73-35-W

Date: September 5, 1973

Respondent: Buffalo Mills, United Merchants and Manufacturers, Inc., Union County

Conclusion of Law: Buffalo Mills was found to be in violation of (1) Section 63-195.12 (a) of the *S. C. Code, 1962* by discharging into Buffalo Creek organic or inorganic matter that causes or tends to cause pollution; and (2) Section III-3 of the Water Classification Standards System by discharging wastes amenable to treatment or control into Buffalo Creek without treatment or control.

Action: Buffalo Mills was ordered to submit a plan by Nov. 5, 1973 for the elimination of all untreated waste discharges into State waters; and if necessary, to complete construction by July 5, 1974 of a waste treatment facility or eliminate all waste discharges to State waters.

Order # 73-36-W

Date: September 5, 1973

Respondent: City of Gaffney, Cherokee County

Conclusion of Law: City of Gaffney was found to be in violation of Sections III-3 and IV of the Water Classification Standards by discharging wastes amenable to treatment or control into State waters without treatment or control and by causing a contravention of standards for Class B waters as pertains to fecal coliform content.

Action: The City of Gaffney was ordered to submit by May 1, 1974 an application for an appropriate permit and an engineering report which included a proposal for providing adequate treatment. Construction of a waste treatment facility was ordered to be completed by Oct. 1, 1976.

Order # 73-37-W

Date: September 5, 1973

Respondent: Suburban Utilities, Hollywood Hills Subdivision, Richland County.

Conclusions of Law: Suburban Utilities was found to be in violation of Section 63-195.14 of the *S. C. Code, 1962* by operating an approved waste disposal facility in violation of the conditions of the construction permit by exceeding the authorized volume.

Action: Suburban Utilities was ordered to submit by November 5, 1973 an application for an appropriate permit and an engineering report including a proposal for providing adequate treatment and complete by January 5, 1975 construction of a waste treatment facility.

Order # 73-38-W

Date: September 5, 1973

Respondent: Chester Sewer District, Chester County

Conclusion of Law: Chester Sewer District was found to be in violation of the following sections of the Water Classifications Standards System:

(1) Section III-3 by discharging waste which had not received the required treatment into Grassy Run Branch;

(2) Section IV-1 in that the log mean of five consecutive samples exceeded the allowable levels of fecal coliform bacteria; and (3) Section IV-3 in that the dissolved oxygen was found to be less than acceptable limits.

Action: Chester Sewer District was ordered to begin preparation of construction plans by October 5, 1973 and to complete construction of the waste treatment facility by November 5, 1975.

Order # 73-39-W

Date: September 5, 1973

Respondent: C and T Refinery, Inc., Charlotte, N. C.

Conclusion of Law: C and T Refinery was found to be in violation of Section 63-195.14, *S. C. Code*, 1962, by operating an approved waste disposal facility not in keeping with conditions of the permit to construct in that the time of "temporary experimental use" had expired.

Action: C and T Refinery was ordered to cease and desist the discharge of waste into waste handling facilities in Lancaster County by July 1, 1974 and to submit by December 1, 1973 an engineering report pertaining to the total elimination of the existing waste handling facilities.

Order # 74-2-W

Date: February 15, 1974

Respondent: Town of Ridgeway, S. C. in Fairfield County

Conclusion of Law: The town of Ridgeway was found to be in violation of Sections III-3 and IV of the State Water Classification Standards System in that it was discharging waste into state waters without adequate treatment and because discharges from septic tanks serving Ridgeway caused a contravention of dissolved oxygen and fecal coliform standards for Class B waters.

Action: The town of Ridgeway was ordered to submit an application for appropriate permits and an engineering report including a proposal for providing adequate treatment by March 1, 1975 and complete construction of the waste treatment facility by July 1, 1977.

Order # 74-3-W

Date: March 20, 1974

Respondent: Don's Laundromat, North Myrtle Beach, Horry County

Conclusion of Law: Don's Laundromat was found to be in violation of

Section 13(a) of the Pollution Control Act and Section III-3 of the Water Classification Standards System for the State in that it was discharging organic or inorganic matter that causes or tended to cause a condition of pollution in the waters of the State, and that it was discharging wastes amenable to treatment or control without treatment into State waters.

Action: Don's Laundromat was ordered to cease the discharge of untreated wastewater by June 15, 1974.

Order # 74-6-W

Date: April 10, 1974

Respondent: Rogers Washerette, Salem, S. C. in Oconee County

Conclusion of Law: Rogers Washerette was found to be in violation of Section 13(a) of the Pollution Control Act for discharging, into State waters, organic or inorganic matter that causes or tends to cause a condition of pollution and Section III-3 of the Water Classification Standards System by discharging wastes amenable to treatment or control into State waters.

Action: Rogers Washerette was ordered to submit an application for appropriate permits and an engineering report, final plans and specifications for providing adequate treatment by June 1, 1974 and complete construction of the waste treatment facility by February 1, 1975.

Consent Orders

In addition to the orders summarized above, the following Consent Orders (those agreed upon by the respondent who takes no exception to the charges presented and foregoes a formal hearing) were issued:

73-40-W

Date: December 20, 1974

Respondent: Clemson Realty Company, Heatherwood Subdivision, Pickens County

Action: Clemson Realty Company agreed to take immediate action to repair the access road to the subdivision, make repairs upon the dikes where necessary to ensure compliance with engineering specifications, and make other improvements and proper maintenance in and about the waste treatment facility.

73-41-W

Date: November 28, 1973

Respondent: Marshall Farms, Greenville County

Action: Marshall Farms was ordered to obtain engineering studies including recommendations for improved operation and upgrading of the present facility by December 22, 1973. If any construction or modernization was needed, such construction or modification was ordered to be completed by July 1, 1974.

73-42-W

Date: November 4, 1973

Respondent: Harvey's Restaurant, Pickens County

Action: The President of Harvey's Restaurant was ordered to make appropriate engineering studies for upgrading or replacing the waste disposal facility and to submit application for appropriate permits by January 15, 1974. If the present facility needed modifications or new construction, such construction was to be completed by December 31, 1974.

74-1-W

Date: January 14, 1974

Respondent: Truck Stop, Inc., Richland County

Action: Truck Stop was ordered to complete construction of a 140 gram lift station and force main discharging to treatment facility 2114-C by April 14, 1974 and eliminate the sewage treatment facility then in use.

74-4-W

Date: March 29, 1974

Respondent: Utilities Incorporated, Sherwood Park Subdivision, Lexington County

Action: Utilities Inc. was required to initiate construction by April 15, 1974 of a disinfection system and drainage control system for Sherwood Park Subdivision. Completion date of the system was scheduled for June 1, 1974.

74-5-W

Date: May 10, 1974

Respondent: C. H. Patrick and Company, Inc., Greenville County

Action: C. H. Patrick Company was ordered to establish by April 30, 1974 a more involved housekeeping schedule to prevent chemical residues from being washed from its property into State Waters. The company was further ordered to submit an engineering report by July 30, 1974 outlining remedies to be taken and by September 19, 1975 to complete all activities necessary to eliminate any and all direct or indirect discharges from its property which might cause pollutants originating at the plant to be discharged into any waters of the State.

74-7-W

Date: April 30, 1974

Respondent: Pine Haven Nursing Home, Barnwell County

Action: Pine Haven Nursing Home was ordered to submit, by June 5, 1974, an application for a construction permit and complete as-built plans and specifications for the system in operation. If upgrading of the facility were required, construction was ordered to be completed by June 1, 1975.

74-8-W

Date: May 13, 1974

Respondent: Matthews Realty Company, Inc., Darlington County

Action: Matthews Realty was ordered to submit by June 30, 1974, an engineering report of the waste treatment project proposal for Matown Subdivision as originally designed and permitted. If the waste treatment proposal needed modifications, final plans and specifications were to be submitted by August 30, 1974 and construction completed by August 15, 1975.

74-10-W

Date: May 20, 1974

Respondent: Heater Utilities, Highland Park Subdivision, Richland County.

Action: Heater Utilities was ordered to immediately improve the operations of the waste treatment system for Highland Park Subdivision and to submit a proposal for providing the subdivision with adequate waste treatment either by upgrading of the current facility or tying to the facilities of the East Richland Sewer District. Any construction was ordered to be completed by October 15, 1974.

74-12-W

Date: May 30, 1974

Respondent: Hopkins Laundromat, Richland County

Action: The owner of Hopkins Laundromat was ordered to submit plans and specifications for an adequate waste treatment system for the Laundromat by July 15, 1974. Construction of the facility was to be completed by August 15, 1974.

Orders Amended During FY 74

<i>Order #</i>	<i>Respondent</i>	<i>New Compliance Date</i>
72-2-W	City of Sumter	April 15, 1977
72-5-W	City of Union, Tosches Creek Wastewater Treatment Plant	February 21, 1974
73-4-W	City of Charleston, Plum Island Treatment Plant	January 1, 1977
73-29-W	Riverdale Mill Water District, Spartanburg County	February 1, 1976

Orders Rescinded During FY 74

<i>Order #</i>	<i>Respondent</i>
(11/26/69)	Greenwood Metropolitan District, Wilson Creek Plant, Greenwood County

- 70-12-W Union Piece Dye Works, Charleston County
 72-3-W Riegal Textile Corp., La France Industries,
 Anderson County
 72-7-W Inman Mills, Inman Plant, Spartanburg County
 73-7-W Burris Chemical Company, Inc., York County

Publications*

Air Quality Control

Air Pollution Measurements of the S. C. Air Sampling Network,
 1973.

Commissioner's Office

Manual of Administrative Policy, Procedures, and Information,
 1974.

Communications

Your Child and His Food

Pregnancy and You

Whole Worm Catalog

Baby Coming?

Film Catalog

Just a Word about Training

Occupational Health Conference Booklet

Just the Facts

Update Magazine, Autumn 1973, Vol. 3, No. 4.

Update Magazine, Winter 1974, Vol. 4, No. 1.

Update Magazine, Spring 1974, Vol. 4, No. 2.

Update Magazine, Summer 1974, Vol. 4, No. 3.

Comprehensive Health Planning

Suggested Data Requirements for Comprehensive Health Plan-
 ning.

Pocket Guide for Sanitarians and Engineers, 1974.

Laboratory

DiSalvo, Arthur F., M.D., Fickling, Agnes M. and Ajello, Libero,
 Ph.D. "Infection Caused by *Penicillium marneffei*: Description of
 First Natural Infection in Man." American Journal of Clinical
 Pathology 59: 259-263, 1973.

Moose, John W., M.S., LTC, A.U.S. (Ret.). "The Application of
 Comparative Morphology in the Identification of Intestinal Para-
 sites." Charles C. Thomas, Springfield, Illinois, 1974.

Radiological Health

Report on Accidental Release of Tritium Gas at the Savannah River Plant, May 1974.

Shealey, Heyward G., "The Most Important Measurements in the Environment of Boiling Water Reactors and Pressurized Water Reactors," Presented at the National Health Physics Conference, Houston, Texas, July 1974.

Solid Waste

Sanitary Landfill Operators Training Manual.

Vital Records

South Carolina Vital and Morbidity Statistics for 1972.

*Does not include approximately 60 educational brochures, newsletters, posters, displays and pamphlets.